DRAFT

United States Department of the Interior
Bureau of Land Management
Montana State Office

United States Department of Agriculture
Forest Service
Northern Region

March 1997

SUMMARY OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL

The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people for all times. Management is based on the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation; rangelands; timber; minerals; watershed; fish and wildlife; wilderness; air; and scenic, scientific, and cultural values.

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BLM/MT/PL-97/005+1430

Cover photo: Republic Mountain, Gallatin National Forest, with Cooke City in the foreground.

Cooke City Area Mineral Withdrawal Team
222 North 32nd Street
P.O. Box 36800
Billings, Montana 59107-6800

2300 (CCAM)

Dear Reader,

Enclosed for your review is the Summary, and if requested, the Draft Environmental Impact Statement (EIS) for the Proposed Cooke City Area Mineral Withdrawal. The Summary provides an overview of the analysis while the Draft EIS includes a more detailed analysis of the two alternatives under consideration. The two alternatives include continued minerals management under the current mining laws (No Action) and the proposed mineral withdrawal of approximately 22,000 acres of federal lands near Cooke City, Montana.

A one page "Readers Guide" is included to provide an easy reference for the alternatives and to assist you in understanding each alternative. The Guide displays maps of the alternatives and summarizes in table form federal and private lands available for mining. The Guide also identifies anticipated mineral development for each alternative.

Any person or group may comment on the Draft EIS during the 45-day public comment period. The 45-day comment period is open from March 7 through April 28, 1997. Please submit written comments to the above address.

Comments are most helpful when they point out inconsistencies or errors, provide additional information pertinent to the analysis, or provide rationale for support of an alternative. We welcome questions on the Draft EIS.

Public meetings are scheduled at the following locations:

Cooke City, Montana	Cooke City Fire Hall	April 2
Livingston, Montana	Yellowstone Motor Inn	April 3
Cody, Wyoming	Cody Club	April 9
Red Lodge, Montana	Lupine Inn	April 10

Each meeting will run from 4 to 8 p.m., using an open house format. You will have an opportunity to visit with team leaders and resource specialists, to ask questions and submit comments on the Draft EIS.

Any changes to the Draft EIS made as a result of public comments will be available for public review in the Final EIS.

Copies of the Summary and Draft EIS will be available for review at Bureau of Land Management offices in Billings and Cody, and at Forest Service offices in the following towns: Billings, Bozeman, Gardiner, Helena, Livingston, Missoula, and Red Lodge, Montana and in Cody and Powell, Wyoming. Copies will also be available at the Cooke City School and at libraries in Billings, Bozeman, Livingston, and Red Lodge, Montana, and in Cody and Powell, Wyoming.

We want to personally thank those of you who have participated in the development of this Draft EIS. We hope your involvement will continue as we move forward with the analysis for the Final EIS.

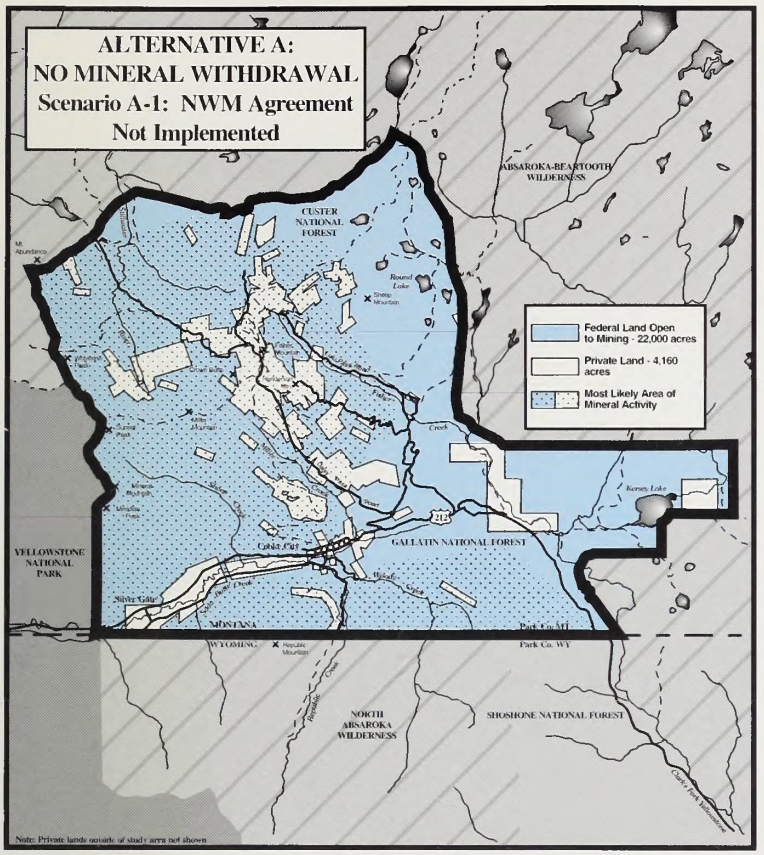
For additional information, please contact Larry Timchak (FS), or John Thompson (BLM), at (406) 255-0322.

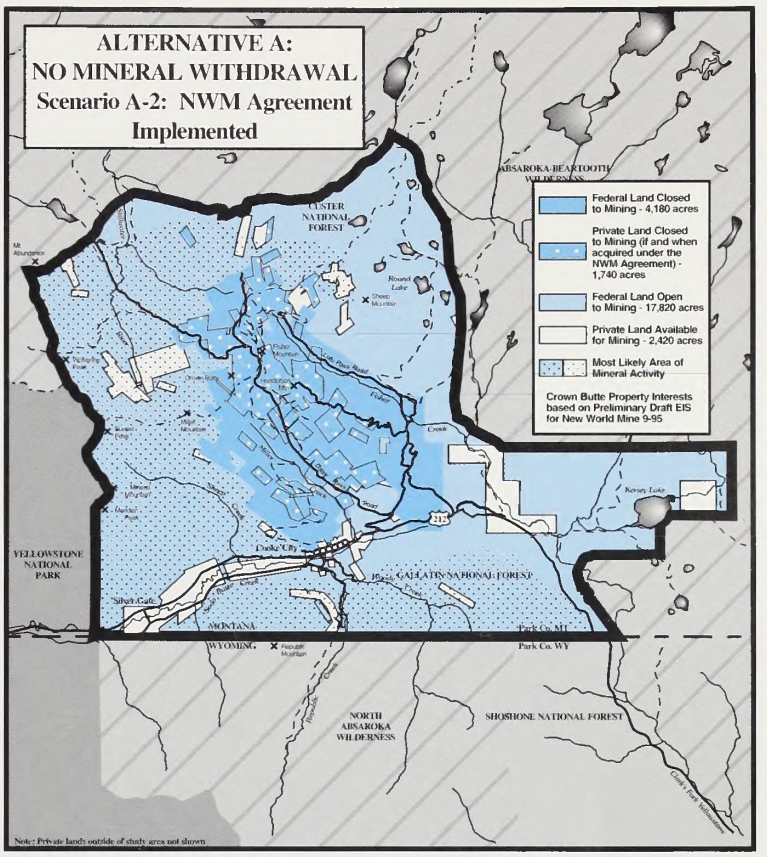
Sincerely,

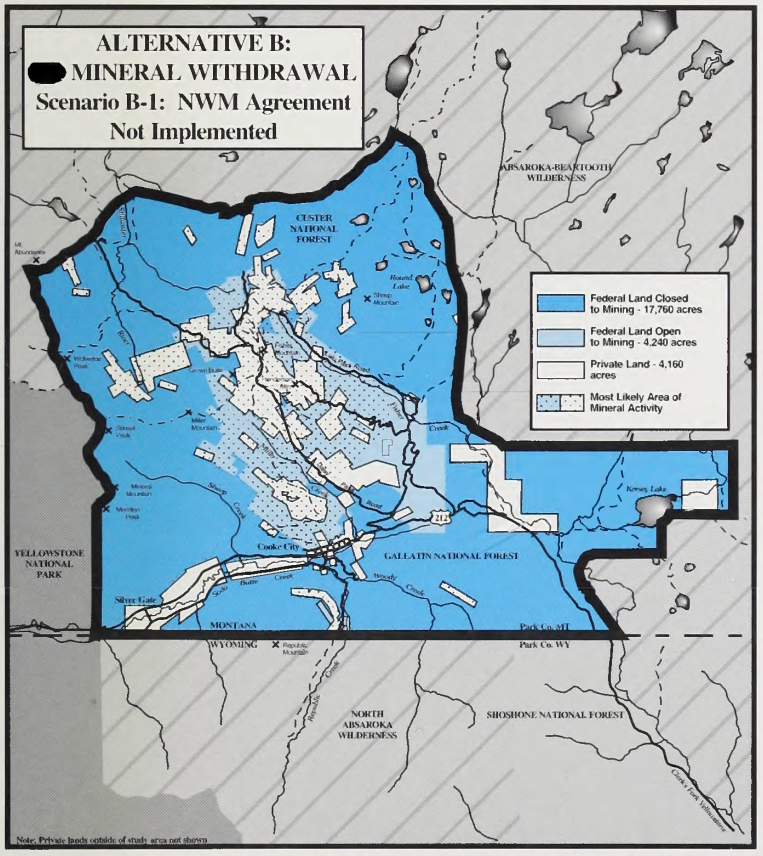
Larry Hamilton
BLM State Director, Montana

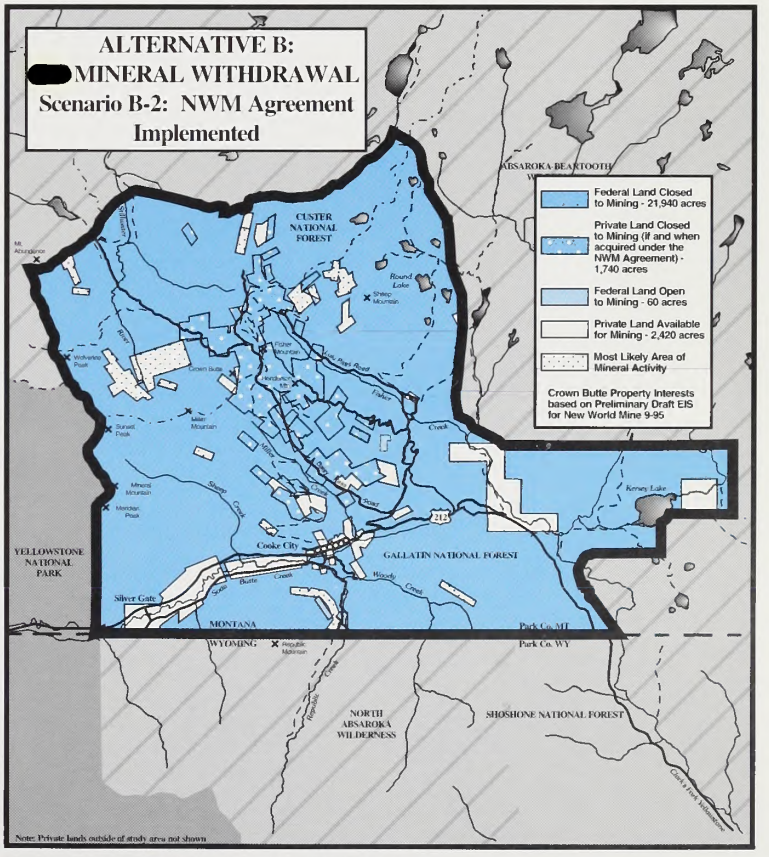
Hal Salwasser
Regional Forester, Northern Region

READER'S GUIDE




ALTERNATIVE A:
NO MINERAL WITHDRAWAL
Scenario A-2: NWM Agreement Implemented
Federal Land Closed to Mining - 4,180 acres
Private Land Closed to Mining (if and when acquired under the NWM Agreement) - 1,740 acres
Federal Land Open to Mining - 17,820 acres
Private Land Available for Mining - 2,420 acres
Most Likely Area of Mineral Activity
Crown Butte Property Interests based on Preliminary Draft EIS for New World Mine 9-95
ABSAROKA-BEARTOOTH WILDERNESS
CUSTER NATIONAL FOREST
GALLATIN NATIONAL FOREST
YELLOWSTONE NATIONAL PARK
NORTH ABSAROKA WILDERNESS
SHOSHONE NATIONAL FOREST
Cooke City
Silver Gate
MONTANA
WYOMING
Park Co. MT
Park Co. WY
Note: Private lands outside of study area not shown




ALTERNATIVE B:
MINERAL WITHDRAWAL
Scenario B-2: NWM Agreement Implemented
Federal Land Closed to Mining - 21,940 acres
Private Land Closed to Mining (if and when acquired under the NWM Agreement) - 1,740 acres
Federal Land Open to Mining - 60 acres
Private Land Available for Mining - 2,420 acres
Most Likely Area of Mineral Activity
Crown Butte Property Interests based on Preliminary Draft EIS for New World Mine 9-95
ABSAROKA-BEARTOOTH WILDERNESS
CUSTER NATIONAL FOREST
GALLATIN NATIONAL FOREST
YELLOWSTONE NATIONAL PARK
NORTH ABSAROKA WILDERNESS
SHOSHONE NATIONAL FOREST
Cooke City
Silver Gate
MONTANA
WYOMING
Park Co. MT
Park Co. WY
Note: Private lands outside of study area not shown

N

Yellowstone National Park

Wilderness

Private lands (not subject to withdrawal)

National Forest Land

Study Area Boundary

Streams

Trails

Roads

National Forest Boundary

READER'S GUIDE

Cooke City Area Proposed Mineral Withdrawal EIS - Draft

SUMMARY COMPARISON OF ALTERNATIVES

ALTERNATIVE A: NO MINERAL WITHDRAWAL	ALT B: PROPOSED MINERAL WITHDRAWAL
22,000 acres of federal minerals would remain open to mineral location and entry subject to management guidelines and applicable law. **Exploration and mining** on federal lands would be subject to federal surface management regulations and other applicable state and federal laws. Bonding would be required. **Forest plans** would not be amended regarding locatable mineral management.	22,000 acres of federal minerals, subject to valid existing rights (VER), would be withdrawn from mineral location and entry for 20 years. Lands acquired by the federal government would be subject to the terms and conditions of the withdrawal. **Exploration and mining** for locatable minerals and leasable hardrock minerals would be prohibited on federal lands without VER. On federal lands with VER management would be same as in Alternative A. **Forest plans** would be amended to be consistent with the terms and conditions of the mineral withdrawal.

BASIS FOR ENVIRONMENTAL IMPACT ANALYSIS			
Scenario A-1 NWM Agreement Not Implemented	**Scenario A-2: NWM Agreement Implemented**	**Scenario B-1: NWM Agreement Not Implemented**	**Scenario B-2: NWM Agreement Implemented**
26,160 acres (22,000 acres of federal land; 4,160 acres of private land) would be available for mineral development. **Mineral development forecast includes:** 3 Mines (the NWM, another underground mine of similar size [2% probability], and a surface mine of similar size [10% probability]); 10 exploratory drilling operations; mine reclamation; work camp for each mine; construction of a 69 kV powerline between Cody and Cooke City; plowing US 212 east of Cooke City during the winter; employee residency in surrounding communities Mining activity would occur on private and federal land.	**20,240 acres (17,280 acres of federal land and 2,420 acres of private land)would be available for mining.** Interests acquired under the NWM Agreement (4,180 acres of unpatented mining claims and 1,740 acres of private land) would not be available for mining. **Mineral development forecast includes:** 1 Mine (an underground mine [2% probability]); 5 exploratory drilling operations; mine reclamation; work camp for the mine; construction of a 69 kV powerline between Cody and Cooke City; plowing US 212 east of Cooke City during the winter; employee residency in surrounding communities. Most mining would occur on federal land.	**8,400 acres (4,240 acres of federal unpatented mining claims and 4,160 acres of private land) would be available for mining**. 17,760 acres of federal minerals would be immediately withdrawn from mineral entry. Assumes 4,240 acres of federal land with VER. **Mineral development forecast includes:** 3 mines (the NWM, another underground mine of similar size [2% probability], and a surface mine of similar size [10% probability]); 7 exploratory drilling operations; mine reclamation; work camp for each mine; construction of a 69 kV powerline between Cody and Cooke City; plowing US 212 east of Cooke City during the winter; employee residency in surrounding communities Most mining would occur on private land.	**2,480 acres (60 acres of unpatented federal mining claims and 2,420 acres of private land) would be available for mining.** 17,769 acres of federal minerals and interests acquired under the NWM Agreement (4,180 acres of federal unpatented mining claims and 1,740 acres of private land) would be withdrawn. **Mineral development forecast includes:** No mines; 1 exploratory drilling operation Mining activity would occur on private land.

Other reasonably foreseeable independent activities include: Highway construction and maintenance, increased recreation in Yellowstone NP and surrounding areas, and continued residential development.

PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

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PROPOSED COOKE CITY AREA MINERAL WITHDRAWAL DRAFT ENVIRONMENTAL IMPACT STATEMENT

SUMMARY

PURPOSE AND NEED FOR ACTION

INTRODUCTION

This Summary provides an "overview" of the potential environmental consequences of implementing various alternatives for managing federal locatable and leasable hardrock mineral resources on National Forest System lands near Cooke City, Montana. While much of the detail presented in the Draft Environmental Impact Statement (DEIS) for the Cooke City Area Mineral Withdrawal (CCAMW) has been eliminated to produce this document, the Summary is meant to provide the reader with sufficient information to understand:

- What the proposed mineral withdrawal would do and why it has been proposed;
- What alternatives to the withdrawal have been considered;
- What the setting is like and what resource uses and conditions are present in the proposed withdrawal area; and
- What changes or risks of change in existing environmental conditions, resources, or uses may occur as a result of implementing the proposed action or the alternatives considered in detail in the analysis.

The USDA Forest Service (FS) and the USDI Bureau of Land Management (BLM) are co-lead agencies responsible for preparation of the EIS. The Secretary of the Interior will use the information in this FEIS as the basis for a decision on future management of the federal mineral resource.

BACKGROUND

On August 25, 1995, President Clinton toured the site of the then-proposed New World Mine near Cooke City, Montana, and expressed concerns about potential effects of mining on the area's outstanding natural resources. Following that tour, the President declared a two-year moratorium on any new mining claims within the area. The two-year period provides time for the lead agencies to complete an environmental study of a longer term mineral withdrawal.

A mineral withdrawal prevents filing of new mining claims on federal lands under the General Mining Law of 1872. Withdrawals are a management tool that may be implemented to limit mineral-related activities in order to maintain other resource values in the area (43 Code of Federal Regulations (CFR) 2310).

The petition to pursue a mineral withdrawal was approved by the Secretary of the Interior on August 28, 1995. The "Notice of Proposed Withdrawal" was published in the *Federal Register* on September 1, 1995, at which time the two-year moratorium on new claims went into effect.

The proposed mineral withdrawal was amended on September 16, 1996, in response to the New World Mine (NWM) Agreement of August 12, 1996. The NWM Agreement between the United States, Crown Butte Mines, Inc. (Crown Butte), and the Greater Yellowstone Coalition, provides for cessation of the permit application process for the proposed New World Mine, and acquisition (by exchange) of property interests held by Crown Butte in the New World Mining District. The proposed mineral withdrawal (which originally applied to 19,100 acres of federal land), was expanded to include: 1) an additional 2,960 acres of National Forest in the Kersey Lake area, 2) any lands or minerals acquired in the area in the future by the U.S., and 3) leasable hardrock minerals. The Kersey Lake addition

was also made in response to public concerns expressed in the initial stages of scoping for the proposed withdrawal.

Unless a mineral withdrawal is approved by the Secretary of the Interior by August 31, 1997, federal lands within the area will reopen to filing of new mining claims.

GENERAL LOCATION AND GEOGRAPHIC SETTING

The proposed mineral withdrawal area (study area) is located in the Gallatin and the Custer National Forests near Cooke City, Montana (Map 1). The study area is adjacent to the northeast corner of Yellowstone National Park (NP), Wyoming, and is bordered on the west, north, and east by the Absaroka-Beartooth (A-B) Wilderness in Montana. The state boundary between Montana and Wyoming forms the southern boundary of the study area. Adjacent to the southern boundary is the North Absaroka Wilderness and a non-wilderness corridor along US 212 and the Clarks Fork of the Yellowstone (Clarks Fork) River. Portions of the headwaters of three rivers - the Clarks Fork of the Yellowstone, the Stillwater, and the Lamar (via Soda Butte Creek) - originate in the study area.

The study area comprises approximately 26,160 acres of both private and federal lands. Of this, about 22,000 acres are National Forest administered lands on the Custer and Gallatin National Forests. Scattered throughout the area are about 4,160 acres of private land consisting primarily of patented mining claims. Prior to September 1, 1995, there were 470 unpatented mining claims filed in the area.

PROPOSED ACTION

The Department of the Interior proposes to withdraw from locatable hardrock mineral entry National Forest System lands near Cooke City, Montana, and Yellowstone NP. The proposed mineral withdrawal is for up to 22,000 acres of federal lands, subject to valid existing rights associated with the existing unpatented mining claims in the study area. The withdrawal would have an immediate effect on 17,760 acres of currently unclaimed federal land. The mineral withdrawal may or may not affect the remaining acreage (approximately 4,240 acres of unpatented mining claims), depending upon valid existing rights. If these unpatented mining claims were abandoned or determined to be invalid, the mineral withdrawal would limit mineral-related activities at that time. The mineral withdrawal would be subject to review at the end of 20 years according to federal regulations.

Any private minerals in the study area that may be acquired by the United States would also be subject to the proposed mineral withdrawal. For example, if the U.S. were to acquire minerals in this area as a result of the NWM Agreement, these minerals would be withdrawn from mineral entry under the General Mining Law of 1872 (30 United States Code (USC) 21-54). In addition, any acquired minerals would be withdrawn from hardrock mineral leasing under the Acquired Lands Mineral Leasing Act of 1947 (30 USC 351-359).

PURPOSE AND NEED

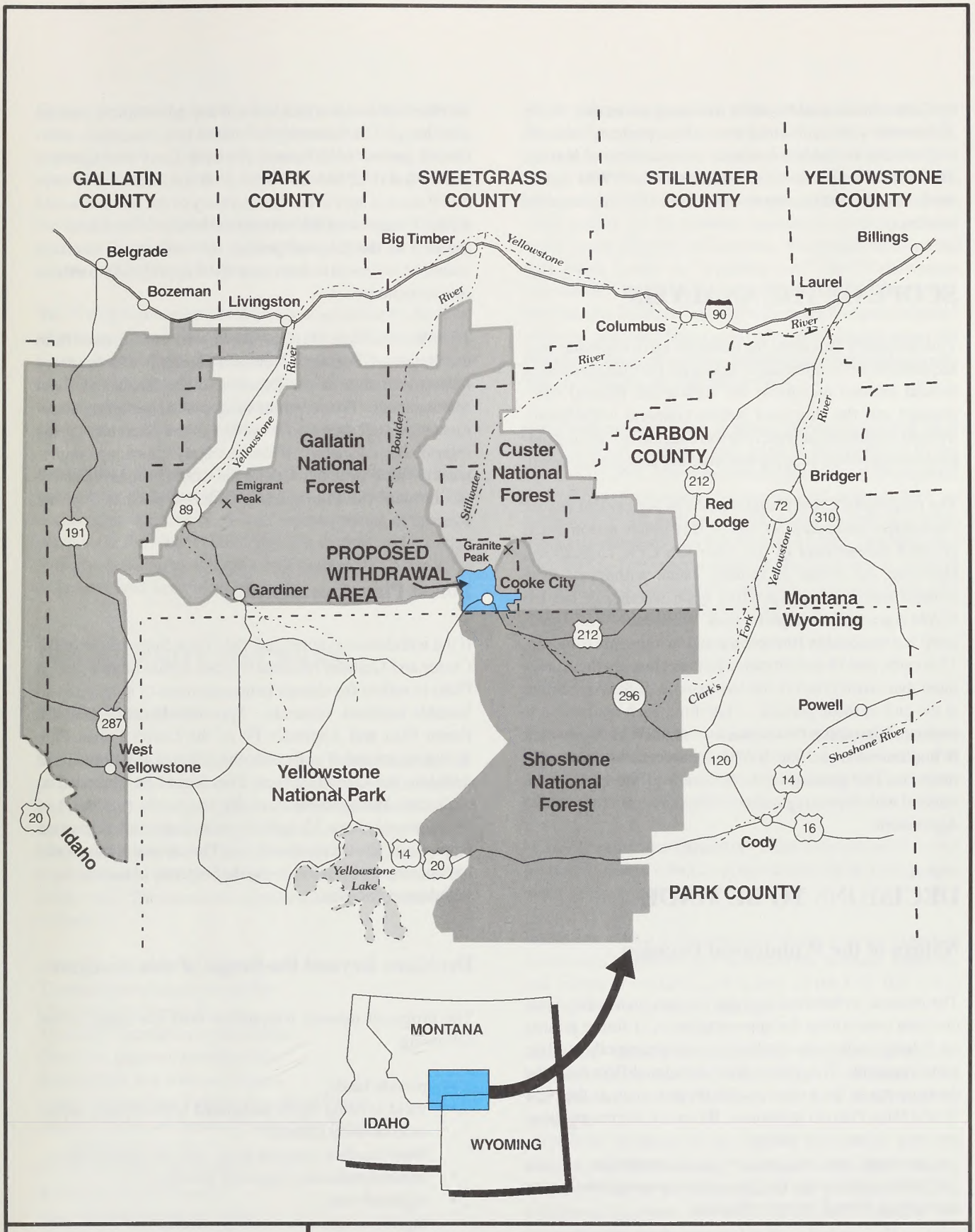
President Clinton expressed concern about the effects of mining on the area's outstanding natural resources. The primary purpose of the proposed mineral withdrawal is to protect water quality and fresh water fishery resources within the watersheds of Soda Butte Creek, Clarks Fork River, and Stillwater River from the effects of potential future hardrock mining activities that could occur on federal lands in the headwaters of these streams.

Based on public comments received during the initial stages of scoping, the purpose has been expanded to address protection of surrounding wilderness areas, scenic integrity, recreation opportunities, cultural resources, and wildlife from the effects of mining activity that could occur on federal lands in the study area.

The study area includes the headwaters of Outstanding Natural Resource Waters, including streams which flow through Yellowstone NP and wilderness areas. The Clarks Fork and Stillwater Rivers and Soda Butte Creek are either designated or eligible Wild and Scenic rivers. Certain mining-related activities pose risks to these watersheds. These risks include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, the potential for failure of tailings impoundments and the uncertainty of mitigating effects to wetlands. Withdrawal of these lands would help ensure that the physical and biological integrity of these important downstream watershed is maintained. The risks and uncertainties associated with mining-related activities on federal lands would be reduced.

Relationship to the NWM Agreement

The proposed mineral withdrawal would help achieve the objectives of the NWM Agreement by precluding mineral development on property interests in the area acquired from Crown Butte. Under the terms of the NWM Agreement, private minerals and unpatented mining claims controlled



MAP 1

General Vicinity of the Proposed Cooke City Area Mineral Withdrawal

by Crown Butte would transfer to federal ownership. In the absence of a mineral withdrawal, these property interests may remain available for mineral entry or mineral leasing. The mineral withdrawal, in concert with the NWM Agreement, ensures that mining would not occur on any acquired interests.

SCOPE OF THE ANALYSIS

This Summary describes the potential environmental consequences of two alternative strategies for management of federal mineral resources; No Action (no mineral withdrawal) and the Proposed Action (mineral withdrawal). Several additional alternatives were identified and considered during public scoping but were not analyzed in detail.

The proposed CCAMW and the NWM Agreement are not considered connected actions in that either action could proceed independent of the other (36 CFR 1508.25(a)). However, the extent of mineral estate withdrawn from mineral entry varies depending upon whether or not the NWM Agreement is implemented. While the NWM Agreement is a reasonably foreseeable action, there are 6-month, 12-month, and 18-month cancellation clauses in the Agreement that could result in the termination of the Agreement at the end of those periods. Therefore, each alternative is evaluated assuming two scenarios - the NWM Agreement **is** implemented and the NWM Agreement **is not** implemented. This provides for disclosure of the effects of a mineral withdrawal regardless of the outcome of the NWM Agreement.

DECISIONS TO BE MADE

Nature of the Withdrawal Decision

The mineral withdrawal analysis focuses on a policy level decision concerning the appropriateness of future mining on federal lands in the study area considering other public values present. This policy level decision differs from the decision made for a site-specific project, such as the New World Mine Plan of Operations. By nature, the project level decision focuses on alternatives designed to resolve resource issues and mitigate effects of a specific project, rather than addressing the policy level issue of whether or not mining should occur in the area.

Withdrawal Decision Process

The authority to withdraw lands from mineral entry lies with the Department of the Interior. The Secretary of the Interior will decide which lands, if any, to withdraw, and for how long. The Secretary is limited to a maximum withdrawal period of 20 years (Federal Land Management Policy Act (FLPMA 204 (c)(1)). If a withdrawal of over 5,000 acres is approved, the Secretary of the Interior would advise Congress of the withdrawal action being taken. At the end of the 20 year period, the withdrawal decision would be reviewed to determine if it is appropriate to extend or terminate it.

The Montana State Director, BLM, with concurrence from the Regional Forester, Northern Region, will submit a recommendation to the Director of the Bureau of Land Management. The recommendation and supporting documentation will then be forwarded to the Secretary of the Interior for a decision. If the Secretary chooses to implement a withdrawal, the withdrawal would become effective on the date the Public Land Order is published in the *Federal Register.*

Forest Plan Amendments

If the withdrawal is approved, the Forest Supervisors of the Custer and Gallatin National Forests would amend Forest Plans to reflect the change in management of locatable and leasable hardrock minerals. Appendix D of the Gallatin Forest Plan and Appendix IV of the Custer Forest Plan would be amended to include the mineral withdrawal. In addition, the Gallatin Forest Plan would be amended to reallocate Management Area 24, (minerals emphasis) to Management Area 15 (grizzly bear/dispersed recreation emphasis). The decision on Forest Plan amendments would be concurrent with or following the Secretary of the Interior's withdrawal decision.

Decisions Beyond the Scope of this Analysis

The proposed mineral withdrawal does not apply to the following:

- private lands,
- valid existing rights associated with existing unpatented mining claims,
  fluid leasable minerals (e.g., oil, gas, geothermal),
- saleable minerals (sand and gravel),
- rights-of-way,
- ingress or egress to existing patented and unpatented mining claims adjacent to or in the vicinity of the lands to be withdrawn, or
- any other authorized surface uses on lands under the administration of the Custer and Gallatin National Forests.

Decisions regarding future mining on private land or unpatented mining claims are beyond the scope of this analysis. Such decisions are subject to appropriate state and federal regulations and a separate environmental review process.

A mineral withdrawal decision would not affect a claimant's right to hold and maintain valid, existing unpatented mining claims within the study area.

The NWM Agreement provides for acquisition by the U.S. of private minerals and unpatented mining claims held by Crown Butte Mines, Inc. (Crown Butte). The decision to exchange property interests and any subsequent environmental analysis that may be necessary to implement this agreement is beyond the scope of this analysis.

If the NWM Agreement is not implemented, the permitting process for the New World Project could resume. The decision to approve a plan of operations or associated permits for the New World Project is distinct and separate from the decision to withdraw approximately 22,000 acres of federal land from mineral entry.

ISSUES AND CONCERNS

Public Comment

The setting in which the proposed New World Mine and the proposed mineral withdrawal occur contributes to the breadth and intensity of public opinion about future minerals management in this area. Comments received during scoping addressed what the public perceives as nationally and internationally recognized resources in and around the study area. The resources mentioned in public comments include:

Absaroka-Beartooth Wilderness
Threatened/endangered species
Chief Joseph Scenic Byway
Abundant recreation opportunities
Charm of gateway communities
Remoteness and solitude of area
Clarks Fork of the Yellowstone Wild River
Eligible Wild and Scenic Rivers-Soda Butte Cr., Stillwater River
North Absaroka Wilderness
Beartooth Scenic Byway
New World Historic District
Wetlands
High mineral potential
High scenic integrity
Four roadless areas
Yellowstone National Park (World Heritage Site, Biosphere Reserve)

While neither the proposed withdrawal action nor the new World Mine project is proposed within Yellowstone NP, there is, as indicated in many of the comment letters, a strong attachment between the Cooke City-Silver Gate, MT, area and the Park. Numerous letters addressed the "high quality" of the outdoor experience currently offered in the Cooke City-Silver Gate area. Some indicated that the area plays a role in "rounding out" the "Yellowstone experience," by providing spectacular country much like that found in the Park, but where there are fewer restrictions on travel and use. There was concern expressed about the potential impacts of mining on the tourism-dependent economies of Cooke City and Silver Gate.

Other commenters were similarly strong in voicing their concern about "locking out" mineral development in the Cooke City area. They commented about the high potential for mineral occurrence, discovery, and development, as evidenced by the mining of gold, silver, copper, and other important minerals that has occurred in the area since the late 1800's. They also pointed out the economic benefits to the local and State economy and the importance of the jobs that would be provided by mining in the area.

Issues

The following Issues were identified through scoping meetings and from a content analysis of approximately 190 letters received from individuals, organizations, and agencies during the scoping period:

Water Quality and Quantity - What is the potential for the proposed mineral withdrawal to maintain surface and ground water quantity and quality?

Wetlands - What is the potential for the proposed mineral withdrawal to protect and maintain the amount, function, and values of wetlands and waters of the U.S. that could otherwise be affected by mining?

Aquatics - What is the potential for the proposed mineral withdrawal to protect, maintain or improve habitat for fish and other aquatic life that could otherwise be affected by mining?

Recreation, Yellowstone National Park, and Special Areas - What is the potential for the proposed mineral withdrawal to protect scenic, aesthetic, and recreation values within the study area and in the adjacent Yellowstone National Park, Absaroka-Beartooth Wilderness, the North Absaroka Wilderness, and designated and eligible wild and scenic rivers from the effects of mining?

Land Uses - What is the potential for the proposed mineral withdrawal to affect uses of private land, unpatented mining claims, and future mining including the New World Mine? How does the mineral withdrawal affect the availability of minerals in the study area?

Economics - What are the economic implications of the proposed mineral withdrawal?

Social - What is the potential for the proposed mineral withdrawal to preclude changes in population, in the need for additional housing and services, and to the overall quality of life that may result from mining?

Cultural - What is the potential for the proposed mineral withdrawal to protect the area's cultural resources that could otherwise be affected by mining?

Wildlife - What is the potential for the proposed mineral withdrawal to protect or maintain wildlife habitat, particularly grizzly bear habitat and populations that could otherwise be affected by mining?

Daisy Pass, flanked by Crown Butte (right) and Fisher Peak (left).

ALTERNATIVES

ALTERNATIVES CONSIDERED IN DETAIL

The alternatives considered in detail represent two different options for the management of hardrock mineral resources on federal lands. While only two alternatives are evaluated in this EIS, the effects of each alternative in terms of lands available or closed to mining varies depending on the status of the New World Mine Agreement. Therefore, each alternative is evaluated using two Scenarios: the first Scenario assumes the NWM Agreement **is not** implemented, and the second Scenario assumes the NWM Agreement **is** implemented.

The effects analysis (discussed later) depends on assumptions outlined in the mineral "forecast" for each alternative Scenario. The amount of mineral development in each Scenario's "forecast" varies depending on existing geologic data and the economic and practical feasibility of mine development. It is important to remember this "forecast" is speculative. It represents an estimate of possible activity and is used **only** to compare possible consequences to the area resources under each Scenario. Aside from the Scenarios that include construction of the proposed New World Mine, the "forecast" **does not** depict where or how much activity that **will** actually take place. Table 1 displays the status of the mineral estate for each alternative Scenario.

Alternative A: No Mineral Withdrawal

This alternative is referred to as the "No Action" Alternative because no action would be taken by the Secretary of the Interior to withdraw the area from mineral location and entry. It would continue the federal minerals management that existed prior to September 1, 1995, when the study area was closed to location of new mining claims for a two-year period.

Under Alternative A, federal lands (approximately 22,000 acres) would remain open and available for mineral exploration and development under the General Mining Law of 1872 (1872 Mining Law). Upon discovery, mining claims could be located for minerals considered to be "locatable" (such as gold, copper, silver, lead, zinc and platinum). These claims would give the locators exclusive possessory rights to the federal mineral deposits subject to conditions under the 1872 Mining Law and other applicable statutes.

Under Alterative B: Mineral Withdrawal Implemented, the Forest Service would amend the Gallatin and Custer Forest Plans to change direction regarding mineral location and entry such that it is consistent with a mineral withdrawal. Under Alternative A no such amendments would be made.

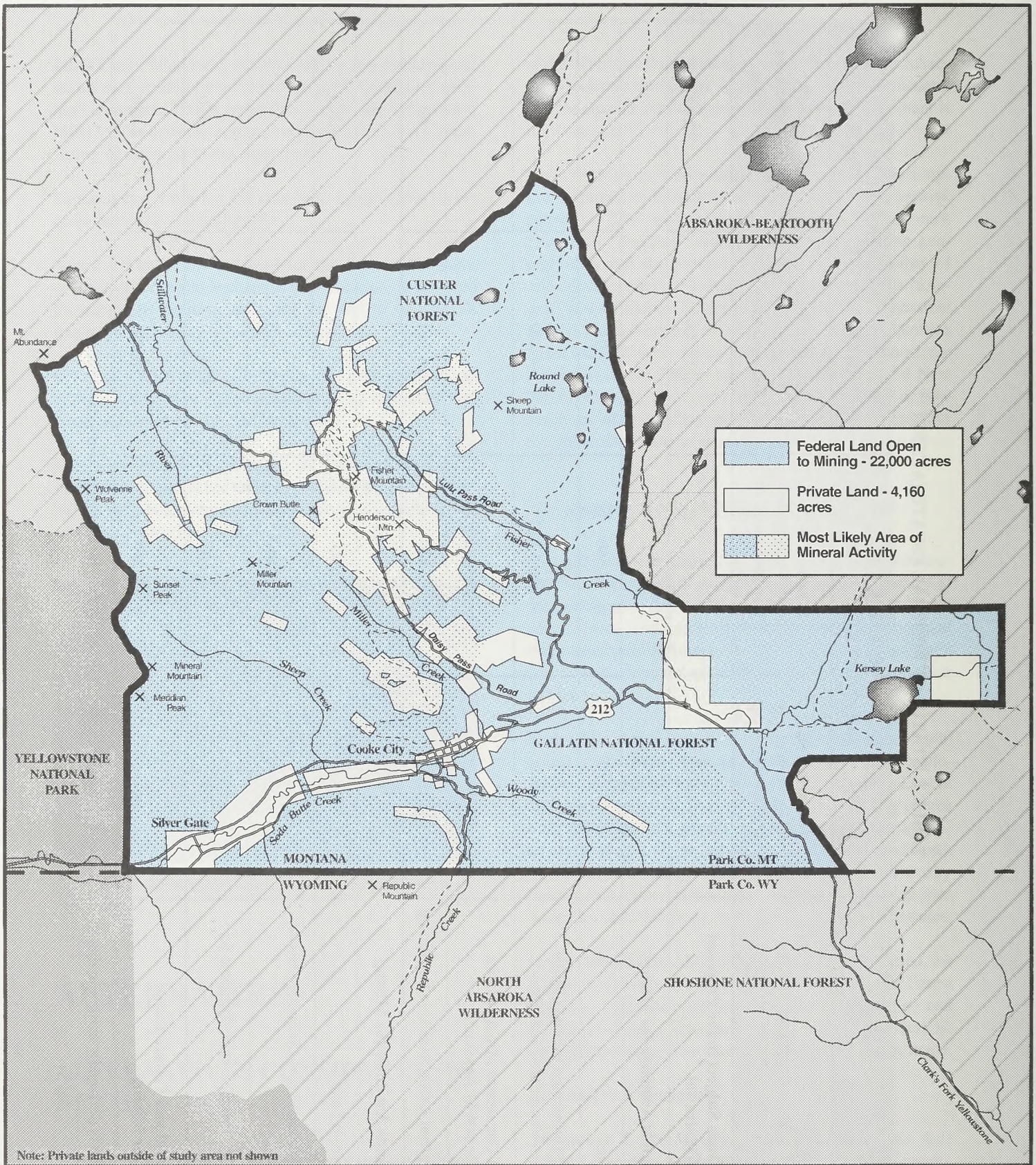
Alternative A Scenarios

Alternative A: No Mineral Withdrawal; Scenario A-1: NWM Agreement Not Implemented. Under this scenario, (Map 2), all 22,000 acres of federal land in the study area remain available for mining, and up to 4,160 acres of private land are available for mineral development. The hypothetical mineral development forecast used to estimate the environmental effects that might occur under this scenario

TABLE 1. STATUS OF MINERAL ESTATE (ACRES)

	ALTERNATIVE A: NO MINERAL WITHDRAWAL		ALTERNATIVE B: PROPOSED MINERAL WITHDRAWAL	
LAND STATUS	**Scenario A-1 NWM Agreement Not Implemented**	**Scenario A-2 NWM Agreement Implemented**	**Scenario B-1: NWM Agreement Not Implemented**	**Scenario B-2: NWM Agreement Implemented**
Federal Lands Subject to the Proposed Mineral Withdrawal	0	0	22,000	22,000
Federal Lands Available for Mining				
Unclaimed	17,760	17,760	0	0
Existing Unpatented Mining Claims Subject to Valid Existing Rights	4,240	4,240 4,240	4,240	
(Minus) Unpatented Mining Claims Subject to NWM Agreement	0	(4,180)*0 (4,180)		
Total Federal Lands Available for Mining	22,000	17,820	4,240	60
Private Lands Available for Mining				
Total Private Lands	4,160	4,160	4,160	4,160
(Minus) Private Lands Subject to NWM Agreement	0	(1,740)*	0 (1,740)	
Remaining Private Lands Available for Mining	4,160	2,420	4,160	2,420
Total Federal and Private Lands Available for Mining	**26,160**	**20,240**	**8,400**	**2,480**

* This figure is derived by assuming the mineral estate on these acres would be withdrawn by a separate withdrawal action.



MAP 2

ALTERNATIVE A: NO MINERAL WITHDRAWAL

Scenario A-1: NWM Agreement Not Implemented

assumes up to three mines, 10 exploratory drilling operations, mine reclamation, a work camp for each mine, construction of a powerline between Cody, WY and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes the New World project likely would be developed; however, it assumes a lower probability of the two additional mines being developed.

Alternative A: No Mineral Withdrawal; Scenario A-2: NWM Agreement Implemented. Under this scenario, (Map 3), 17,820 acres of federal land would be available for mineral location and entry. The interests acquired by the United States under the NWM Agreement, including up to 1,740 acres of private mineral estate and 4,180 acres of unpatented mining claims, would not be available for mining.

Mineral development would be less likely in this scenario, given that most of the area of high mineral occurrence is not available for mineral entry. The hypothetical mineral forecast for this scenario assumes one mine, five exploratory drilling operations, mine reclamation, a work camp for the mine, construction of a powerline between Cody, WY, and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes a low probability of a mine being developed.

Alternative B: Mineral Withdrawal Implemented

Alternative B represents the proposed mineral withdrawal. The withdrawal would not allow individuals to locate new claims in the study area for federal hardrock minerals, including any minerals acquired by the federal government in the future. In addition, leasing of federal hardrock minerals would not be permitted. The mineral withdrawal would not apply to private lands.

In this alternative, federal minerals on up to 22,000 acres would be withdrawn from location and entry for a period of 20 years. Approximately 17,760 acres with no unpatented mining claims would be immediately subject to the withdrawal. If any private lands or minerals in the area are acquired by the federal government in the future, they would be subject to the withdrawal. The withdrawal would be subject to review at the end of 20 years according to federal regulations.

The Gallatin and Custer National Forest Land and Resource Plans (Forest Plans) would be amended to be consistent with the terms and conditions of a mineral withdrawal.

Alternative B Scenarios

Alternative B: Mineral Withdrawal Implemented; Scenario B- 1: NWM Agreement Not Implemented. Under this scenario, (Map 4), 17,760 acres of federal land would be withdrawn immediately from mineral location and entry. It is assumed that approximately 4,240 acres of existing unpatented mining claims on federal land and 4,160 acres of private land would remain available for mining activities.

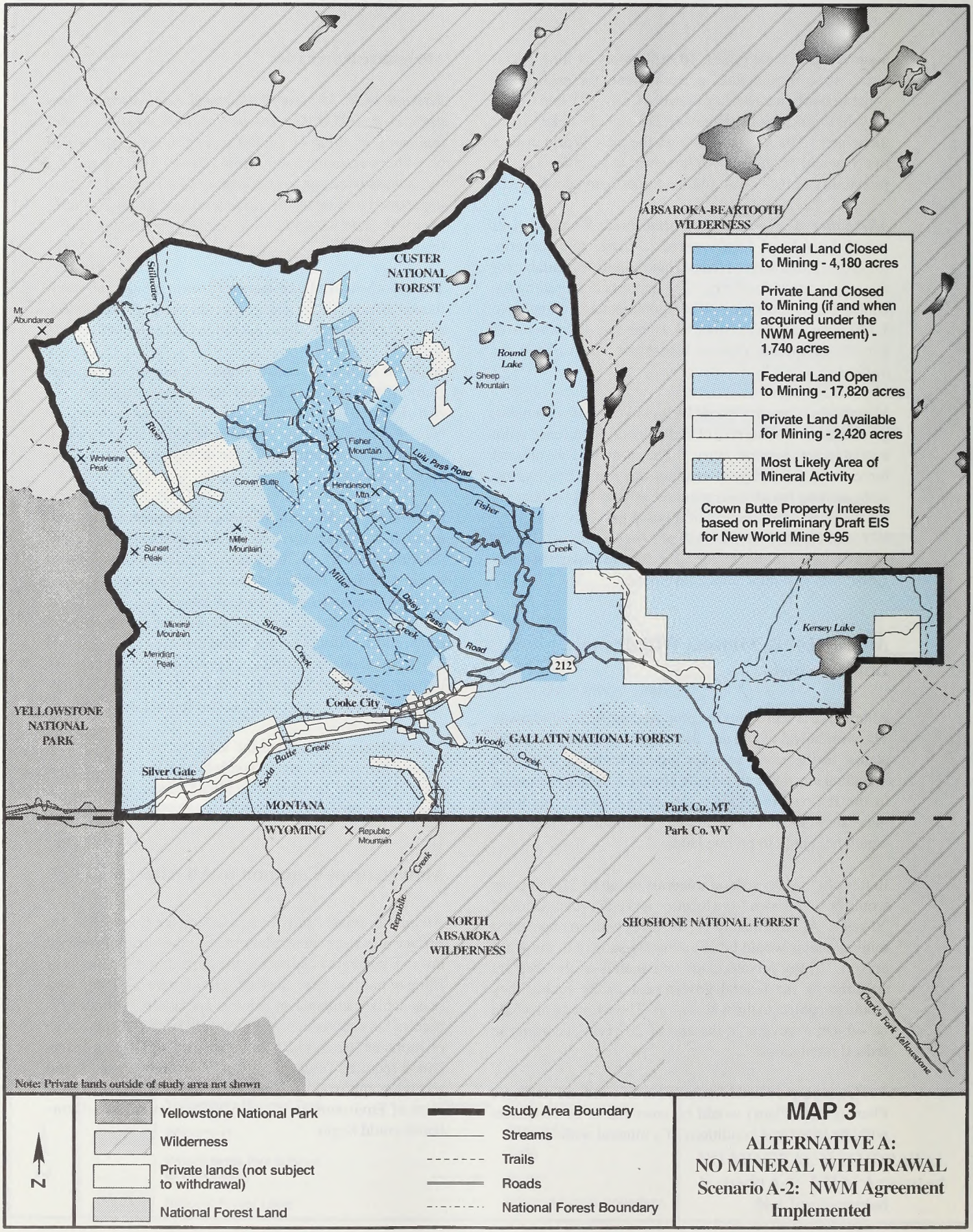
The hypothetical mineral forecast used to estimate environmental effects for this scenario assumes up to three mines, seven exploratory drilling operations, mine reclamation, a work
camp for each mine, construction of a powerline between Cody, WY and Cooke City, MT, and plowing Highway 212 east of Cooke City in the winter. The forecast assumes the New World mine likely would be developed; however, it assumes a lower probability for development of the two additional mines.

Alternative B: Mineral Withdrawal Implemented; Scenario B-2: NWM Agreement Implemented. Under this scenario (Map 5), 17,760 acres of unclaimed federal land are immediately subject to the mineral withdrawal. The interests acquired by the United States under the NWM Agreement, including up to 1,740 acres of private mineral estate and 4,180 acres of unpatented mining claims, would not be available for mining. Approximately 60 acres of unpatented mining claims on federal land and 2,420 acres of private land remain available for mineral development.

This scenario would have the least potential for mineral development of the four scenarios examined. The hypothetical mineral forecast includes no mines and only one exploratory drilling operation.

Management Common to All Alternatives

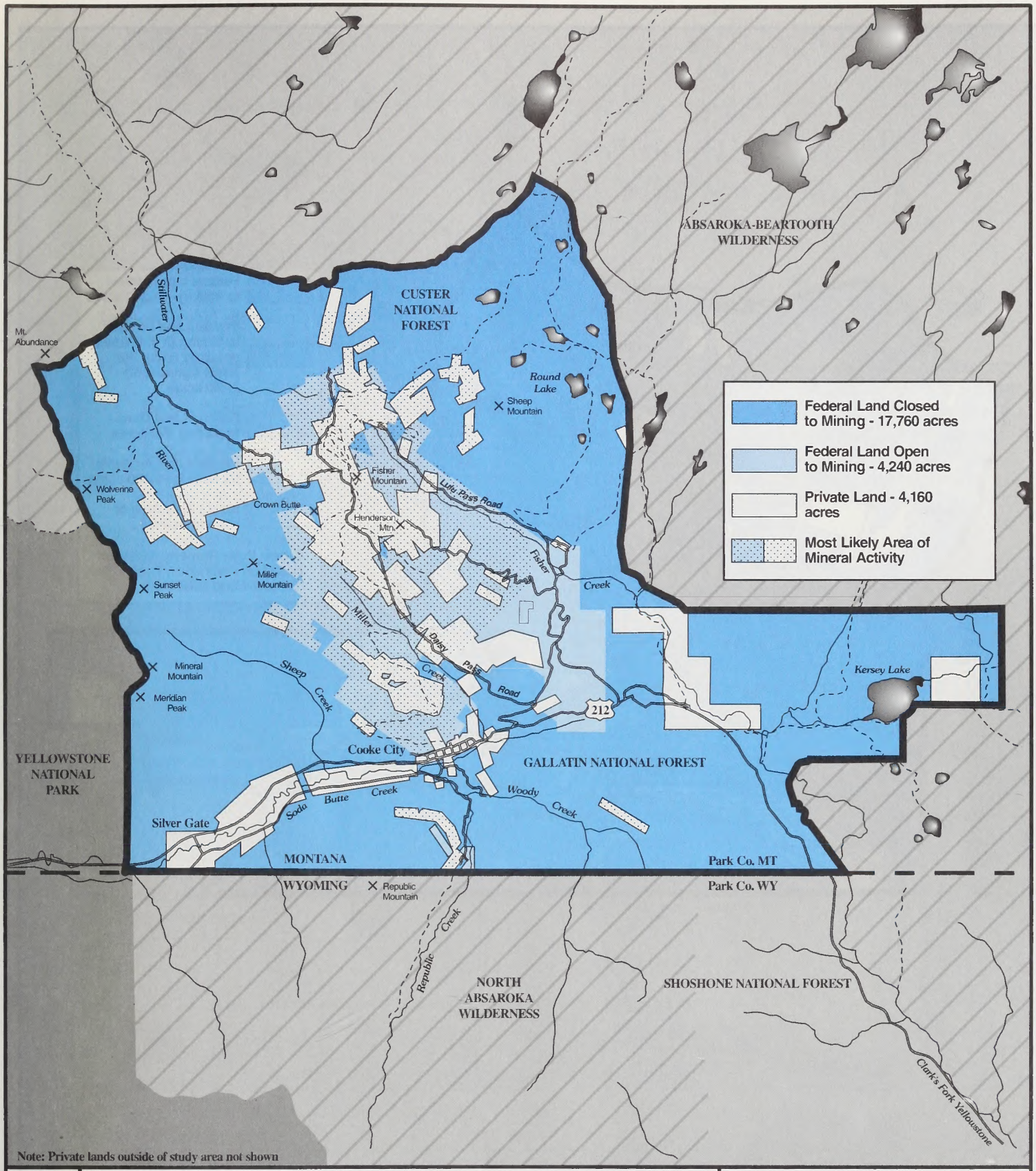
All mining-related activities on federal lands are subject to surface management regulations and other state and federal laws. Unpatented claims require annual improvements or filing of holding fees. Surface activities are limited to uses reasonably incidental to mining operations. Bonding is required in accordance with Forest Service (FS) and State of Montana regulations. Any expected significant disturbance requires filing of a plan of operations with, and receiving approval from, the FS and the Montana Department of Environmental Quality before any surface disturbance could begin.



MAP 3

ALTERNATIVE A: NO MINERAL WITHDRAWAL

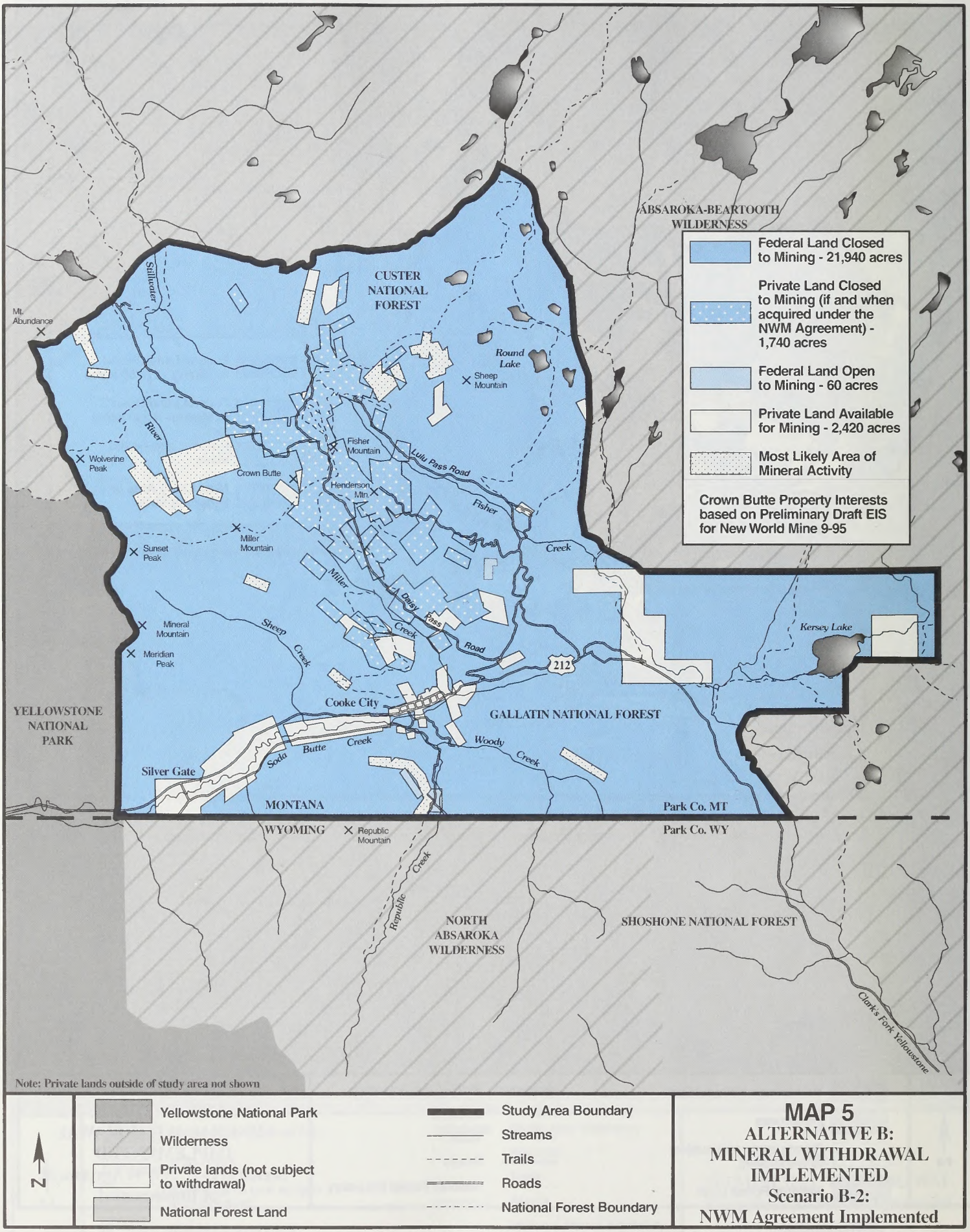
Scenario A-2: NWM Agreement Implemented



MAP 4

ALTERNATIVE B: MINERAL WITHDRAWAL IMPLEMENTED

Scenario B-1: NWM Agreement Not Implemented



MAP 5

ALTERNATIVE B: MINERAL WITHDRAWAL IMPLEMENTED

Scenario B-2: NWM Agreement Implemented

Preferred Alternative

Alternative B: Proposed Mineral Withdrawal Implemented is the Preferred Alternative.

ALTERNATIVES ELIMINATED FROM DETAILED STUDY

Some additional alternatives surfaced during the scoping process. The following alternatives were considered but not analyzed in detail:

- Reduce the size of the mineral withdrawal to a quarter mile buffer adjacent to Yellowstone National Park.
- Expedite validity reviews of existing claims.
- Reduce the size of the mineral withdrawal to exclude the area with the highest mineral development potential.
- Extend the time period of the proposed withdrawal beyond 20 years.
- Expand the withdrawal area to include the corridor along the Clarks Fork of the Yellowstone River.
- Analyze the withdrawal of 19,100 acres.

These alternatives were not analyzed in detail for one or more of the following reasons:

- Anticipated effects would be the same as another alternative being analyzed in detail.
- The alternative does not better meet the purpose and need or result in different
- environmental effects.
- The alternative is inconsistent with laws and regulations.
- The alternative is beyond the scope of the proposed withdrawal decision.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS

INTRODUCTION

This section describes the resources and values that could be affected by a decision to withdraw or not withdraw federal lands within the study area from mineral location and entry. The resources and values discussed were raised as issues during scoping. Also described in this section are the environmental consequences that are anticipated to occur as a result of implementing each alternative.

Nature of Effects Analysis

As previously discussed, the mineral withdrawal analysis focuses on a policy level decision concerning the appropriateness of future mining on federal lands in the area considering other public values present. This broader look at the area differs from the project level analysis employed for a site-specific project, such as the New World Project. As illustrated in the Table 2, the project level analysis focuses on quantifying the effects of implementing site-specific alternatives designed to resolve resource issues and to mitigate effects of a specific project. The environmental effects of a mineral withdrawal are much less specific, and usually cannot be quantified as well as can those of a site-specific action.

TABLE 2. NATURE OF ANALYSIS

Mineral Withdrawal (Policy Level Decision)	New World Project (Site-Specific Project Decision)
Effects largely based on assumptions about future mineral development	Effects based on site-specific plans
Effects are described on area or drainage level	Effects are site-specific based on location of facilities
Effects less easily quantified; described in terms of change, risk, trends	Effects can be more easily quantified or measured

The environmental effects on resources in and around the study area are based on the hypothetical mineral forecasts for each Scenario, as described previously. Because the forecasts are speculative and general in nature, the environmental effects tend to be expressed in more general terms, focus more on changing trends, and are expressed more in terms of probable risk when compared to effects from a site specific project.

Reasonably Foreseeable Activities Not Related to Mining

There are activities, independent of mining, that are likely to occur in the area in the foreseeable future. These activities are considered in the analysis as being "cumulative" to the effects of any potential mining and include highway reconstruction, additional residential development and water rights limitations in Soda Butte Creek drainage.

ISSUES, AFFECTED ENVIRONMENT, AND ENVIRONMENTAL CONSEQUENCES

The following discussion focuses on the issues raised in scoping. For each issue, there is a description of the affected environment and a summary comparison of the potential environmental effects of implementing each of the four Scenarios.

Water Quantity and Quality, Wetlands, and Floodplains

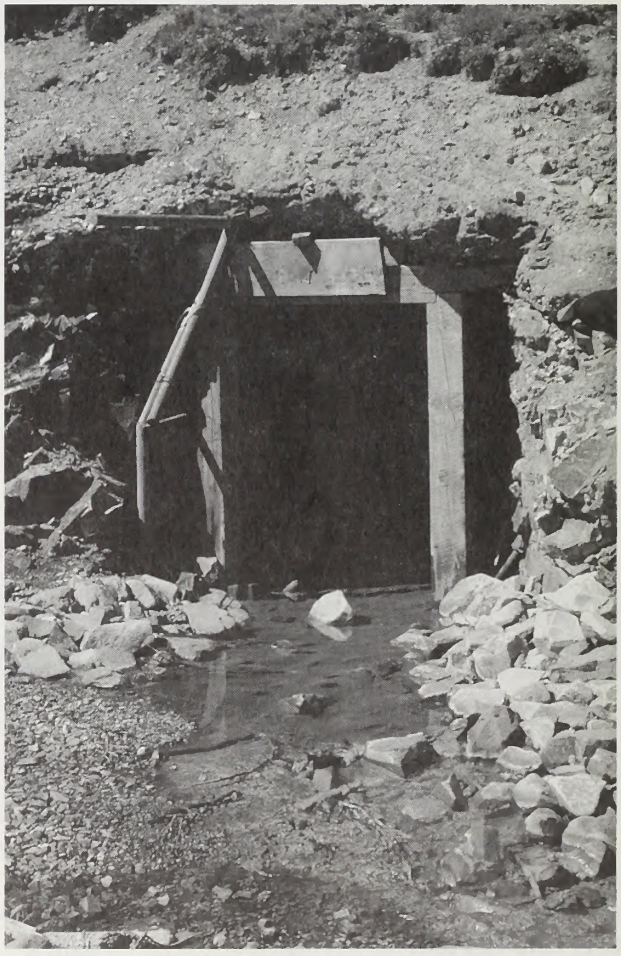
Affected Environment. The study area is relatively moist with an annual average precipitation of 35-60 inches, high drainage density of perennial streams, and an extensive wetland resource. Parts of the headwaters of three systems originate in the study area - Stillwater, Clarks Fork, and Lamar Rivers (via Soda Butte Creek).

The study area includes the headwaters of Outstanding Natural Resource Waters, including streams which flow through Yellowstone NP and wilderness areas. The Clarks Fork and Stillwater Rivers and Soda Butte Creek are either designated or eligible Wild and Scenic rivers. Degradation of water quality of streams that originate in the study area and flow into adjacent wilderness or Yellowstone NP is not permitted.

Historical watershed disturbances including roads, the 1988 fires, and historical mining activities have reduced water quality in several study area streams. Fisher Creek, the Upper Clarks Fork River, Daisy Creek, the Upper Stillwater River, and upper Soda Butte Creek have been most heavily impacted. Past mining activities have altered ground-water levels in the vicinity of some adits, particularly Glengarry and Gold Dust adits.

Certain mining-related activities pose risks to these watersheds. These risks include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, the potential for failure of tailings impoundments and the uncertainty of mitigating effects to wetlands.

Environmental Consequences. A water quality regulatory framework is in place to deal with potential adverse effects. Development of mines in the study area (underground or surface) would require careful mine facility design, ground-water mitigation techniques, and capture and treatment of contaminated ground water as it emerges. Intensive ground-water mitigation could reduce, but not eliminate, the poten-



Acid rock drainage from Glengarry Adit, upper Fisher Creek.

tial for ground-water contamination. Ground-water change could be managed with underground mitigation, but surface water treatment may be needed to meet standards. Treatment of water would continue for as long as necessary to meet water quality standards. Wetland mitigation requires mapping of all wetland areas, determination of associated wetland functions, and wetland mitigation. Wetland mitigation sites outside the study area might be necessary.

If completely and successfully implemented, regulations and mitigation would protect water resources to regulatory standards; however, risks and uncertainties are inherent in any mine. Although mine operations have made concerted efforts in recent years to comply with environmental standards, departures from standards have occurred. There remains a potential for failure of designed mitigation or facilities such as tailings impoundments. Water quality may improve with reclamation required on Crown Butte-controlled lands.

Table 3 presents a comparison of the environmental effects that may occur with implementation of each scenario.

TABLE 3. SUMMARY COMPARISON OF EFFECTS TO WATER QUANTITY AND QUALITY AND TO WETLANDS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><td colspan="4">Surface and Ground Water, Wetlands, and Floodplains</td></tr>
<tr><td colspan="3">Mining-related effects would vary by Scenario, based on the probability of mineral development. In general, mining could result in stream flow reduction and degraded ground-water quality. Changes in ground water would also affect surface water quality where water emerges in streams, springs, or seeps. Risks to water resources in this area include the potential for increased acid-rock drainage, the potential for ground-water contamination from underground mines, potential for failure of tailings impoundments, and uncertainty of mitigating effects to wetlands. Surface water quality would be closely regulated with storm water permits for non-point discharges. Special efforts would be necessary to meet water quality standards and non-degradation requirements. Mining could also result in the filling of wetlands and floodplains within the study area which has very limited availability of wetland mitigation sites.</td><td>Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Therefore, potential impacts on surface and ground-water quality, wetlands, and floodplains from mining would not be anticipated.</td></tr>
<tr><td>Potential for impacts on surface and ground-water quality, wetlands, and floodplains would be greatest with the mining activities forecast in this scenario. Impacts could occur on all three major drainages.</td><td>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining activities would be much less than in Scenario A-1. Impacts could occur in either Stillwater or Soda Butte Creek drainage if a mine is developed.</td><td>Potential for impacts on surface and ground-water quality, wetlands, and floodplains from mining would be similar to Scenario A-1. Streams, wetlands, and floodplains on 17,760 acres withdrawn would not be at risk from mining. Some potential New World Mine facility sites would be withdrawn; remaining available locations may increase the risk to water quality and wetlands compared to Scenario A-1.</td><td></td></tr>
</table>

Aquatic Resources

Affected Environment. Poor water quality, as a result of metal concentrations, precludes fish from inhabiting Fisher Creek and limits other forms of aquatic life in that stream. The Clarks Fork of the Yellowstone River is in only fair condition in the study area. This is a result of metals from Fisher Creek and poor habitat quality in the form of elevated sediment levels and limited pool and spawning sites which limit fish production. Except for the 1988 fires, there has been little watershed disturbance in the Broadwater River. Habitat quality for all life stages of fish is rated good to excellent.

The Miller Creek drainage is naturally void of fish because of barriers; however the existing invertebrate community indicates a relatively healthy stream. For Soda Butte Creek, conditions for fish and aquatic life are fair upstream of the McLaren tailings and downstream from Woody Creek. Aquatic health in Soda Butte Creek above McLaren tailings is good, but below the tailings to the Woody Creek confluence poor water quality limits aquatic life. Natural erosion in the Woody Creek drainage contributes extremely high levels of sediment to Soda Butte Creek. Soda Butte Creek below the Woody Creek confluence to Ice Box Canyon supports a genetically pure, isolated population of Yellowstone Cutthroat trout which is considered a sensitive fish species by the Forest Service. Because the population is isolated, it has a low resiliency to catastrophic disturbance.

Poor conditions are present in Woody and Republic Creeks primarily due to extremely high sediment loads and unstable habitat conditions. Historic mining may be influencing water quality in those streams. The overall aquatic health in Sheep Creek is good.

Daisy Creek and the Stillwater River below the Daisy Creek confluence to Goose Creek are in poor health due to poor water quality and high sediment levels. Upstream of Daisy Creek and below Goose Creek, the stream is in fair condition. The Stillwater drainage above the wilderness boundary is naturally void of fish.

Recent reclamation efforts, including recontouring and revegetating roads and open pit mines, and rerouting water from the Glengarry adit have improved aquatic health by reducing sediment and metal loads, but to an unknown degree. Future reclamation plans commensurate with the NWM Agreement (i.e., reclamation of the McLaren and Como pits, closure of the Glengarry Adit), or other remediation of historical mining disturbances via enforcement of the Clean Water Act, would further reduce sediment yield and improve water quality. Water quality improvements would subsequently improve the biological health of area streams to the extent reclamation efforts were successful. These improvements would result in net cumulative benefits to stream ecosystem health.

Environmental Consequences. Table 4 presents a comparison of the environmental effects that may occur with implementation of each scenario.

Recreation, Scenic Integrity, Yellowstone National Park, Special Areas, Air Quality

Recreation and Scenic Integrity

Affected Environment. The study area is part of the Greater Yellowstone area and offers spectacular scenery, abundant wildlife and unique geologic features all within a vast, relatively undisturbed area. Consequently, the quality of outdoor recreation is extremely high. The study area is popular as a recreation area and as an origination point for trips into the surrounding wilderness. Popular activities include hunting, hiking, fishing, scenic driving, horseback riding, camping, snowmobiling, cross country skiing, and four-wheeling. Maintenance of recreational resources in the study area is important for both economic and quality of life reasons.

Scenic integrity of the study area remains high with man-made alterations limited to the highway corridor and the central portion of the study area (Lulu Pass/Daisy Pass loop road). Key observation points include the surrounding wilderness, Yellowstone NP, study area access roads, and highway viewpoints. Cultural features in the study area contribute to scenic integrity.

Environmental Consequences. Table 5 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

Yellowstone National Park

Affected Environment. Yellowstone National Park (NP) is nationally and internationally renowned for its geothermal features, scenery and wildlife. Yellowstone NP borders approximately three miles of the proposed mineral withdrawal area, and 38 percent of the study area drains into the Park via the Soda Butte Creek drainage. Concerns expressed by the National Park Service (NPS) relate to the potential effects of mining on the following issues:

Water quality and quantity in Soda Butte Creek - Soda Butte Creek in Yellowstone NP is considered an Outstanding Natural Resource Water; consequently, water quality degradation is not permitted. The State of Montana has

TABLE 4. SUMMARY COMPARISON OF EFFECTS TO AQUATIC RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Aquatic Resources			
Mining-related effects would vary by scenario, based on probability of mineral development. General effects of mining could affect fish and other aquatic life by reducing streamflow, increasing sedimentation, and changing water quality. These changes in some streams, e.g. Upper Fisher Creek and Daisy Creek would have minimal effect on aquatic habitat and biota because they are already severely impaired from historic mining. Degradation of comparatively healthy streams, e.g. Miller Creek, the Broadwater and Clarks Fork Rivers, and Soda Butte Creek, would be more significant.			Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on fish and other aquatic life would not be anticipated from mining.
Potential for impacts on fish and aquatic life from mining would be greatest with this Scenario. Impacts could occur on all three major drainages.	Potential for impacts on fish and aquatic life from mining would be much less than with Scenario A-1. Impacts may occur in streams in either Stillwater or Soda Butte Creek drainage if a mine is developed.	Potential for impacts on fish and aquatic life from mining would be similar to Scenario A-1. Impacts could originate on private land or federal land with valid claims on any of the three major drainages. Some potential NW Project facility sites would be withdrawn; remaining available locations may increase the risk to aquatic compared to Scenario A-1.	

TABLE 5. SUMMARY COMPARISON OF EFFECTS TO RECREATION AND SCENIC INTEGRITY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><td colspan="4">Recreation and Scenic Integrity</td></tr>
<tr><td colspan="3">Mining-related effects would vary by scenario, based on probability of mineral development. General effects of mining activities would change the recreation setting, recreation experiences, level of recreation use, and scenic integrity of the area. Mining would likely change recreation settings in semi-primitive areas to a roaded natural settings. Changes in noise, lighting, traffic, and local population caused by mining are also likely to change the recreation experiences. Overall recreation use would not be expected to change even though users seeking solitude and natural environments may be displaced. Improved local access roads, winter access, and increases in local population would increase use. Mining would likely change scenic integrity levels in areas of very high or high scenic integrity to levels of moderate scenic integrity. Depending on the location, mining related activities could be visible from wilderness areas or Yellowstone NP.</td><td rowspan="2">Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential mining-related impacts on recreation setting, recreation experiences, level of recreation use, and scenic integrity of the area would not be anticipated.</td></tr>
<tr><td>Potential for impacts on recreation setting, recreation experiences, recreation use and scenic integrity from mining-related activities forecast under this Scenario would be more likely than with the other scenarios. Impacts would be most likely in the Lulu/Daisy Pass, US 212 Corridor, Sheep Creek, Upper Stillwater, and Woody Creek recreation settings.</td><td>Potential for impacts on recreation setting, recreation experiences, recreation use and Scenic integrity from mining-related activities forecast under this scenario would be much less than under Scenario A-1. Impacts would be most likely outside the Lulu/Daisy Pass recreation settings.</td><td>Potential for impacts on recreation setting, recreation experiences, recreation use and scenic integrity from mining-related activities would be similar to Scenario A-1, but these impacts would most likely occur in the Lulu/ Daisy Pass recreation settings. Semi-primitive recreation setting and opportunities on 17,760 acres would be maintained.</td></tr>
</table>

completed a water rights compact with the United States for Soda Butte Creek. The NPS has instream flow rights for the entire flow of Soda Butte Creek subject to certain existing and future surface and ground water rights. Water quality in Soda Butte Creek is impaired from past mining (McLaren tailings) and high levels of natural sediment from Woody and Republic Creek.

Traffic, Park Highways, and Park Operations - US Highway 212, the Beartooth Scenic Byway, through Cooke City-Silver Gate is one of five main entrances to Yellowstone NP. US 212 east of Cooke City is closed during the winter. Winter travel from the study area to Yellowstone NP is limited to US 212 west through the Park and then north to Gardiner. The NPS provides many important services to the Cooke City/Silver Gate area, including road maintenance and snow plowing, emergency medical services, first response and back-up law enforcement, and solid waste collection. NPS is negotiating with Park County, Montana, to relinquish their role in providing services.

Recreation/Tourism - Yellowstone NP receives over three million visitors per year; about 7 percent of the visitors enter via the Northeast entrance near Cooke City. Of the five Park entrances, the northeast entrance through Cooke City/ Silver Gate receives 5 to 7 percent of the total. The northeast entrance has had the greatest percentage increase in visitors of the five Park entrances. This could partially be due to rerouting of visitors from the Park's east entrance because of reconstruction and associated traffic delays and temporary closure of the east entrance road in the Park, and to the reintroduction of the gray wolf into the Lamar Valley.

Soda Butte Creek, Yellowstone National Park, downstream from study area.

Noise - In the northeast corner of Yellowstone NP, primary sources of noise heard from outside the Park include vehicle traffic on the Tower Junction/northeast entrance highway and US 212; chainsaw sounds from occasional firewood cutting on private and federal lands near the Park's northeast entrance, and snowmobiles on private and National Forest administered land adjacent to the Park. The Daisy Pass and Lulu Pass areas in the study area are very popular snowmobile areas.

Scenic Integrity - The study area, or portions thereof, is visible from some higher elevation locations, such as Wolverine Peak, along the northeast boundary of the Park. Some historical mine disturbances, such as the McLaren Pit, are visible from Wolverine Peak. These disturbances, which are in the process of being recontoured and revegetated with native plants, will eventually blend with the surrounding landscape. The only hiking trail offering a view of the study area crosses Republic Pass about six miles south of the area. The number of backcountry users of Republic Pass and Wolverine Peak is low. The study area is also briefly visible from US 212 near the northeast entrance to the Park.

Air quality and visibility - Yellowstone NP is designated as a Class 1 airshed under the Prevention of Significant Deterioration (PSD) program of the Clean Air Act. Prevailing wind direction in the Park is from the southwest; although, storm fronts can have northerly or southerly wind directions. Airflow into Yellowstone NP from the study area occurs from summertime down-valley breezes associated with nighttime cold air drainage.

World Heritage Site and Biosphere Reserve - Yellowstone NP has been designated as both a World Heritage Site (cultural and natural property), and a Biosphere Reserve (unaltered natural integrity and ecological integrity of area). In 1995, the World Heritage Committee placed Yellowstone NP on the list of World Heritage in danger because of ascertained and potential dangers. The Committee noted that potential threats to the Park from proposed mining-related activities are effects on quantity and quality of ground and surface water.

Environmental Consequences. Table 6 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

TABLE 6. SUMMARY COMPARISON OF EFFECTS TO YELLOWSTONE NATIONAL PARK BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><th colspan="4">Yellowstone National Park</th></tr>
<tr><td colspan="3">Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining in the study area could increase the need for staff, housing, road maintenance, and other services within the Park due to additional winter access and increased local population in the Cooke City/Silver Gate area. Park visitation would also increase at the NE entrance if the highway between Cooke City and Cody is open all winter. Backcountry visitor experiences in the NE portion of the Park near the Park boundary could be affected by noise, night lighting, and other visual impacts. Mining could affect water quality and quantity in Soda Butte Creek which flows into the Park. Ambient air quality standards, visibility standards and PSD increments in Yellowstone NP are not expected to be exceeded with future mining. Mining would continue as one of the identified threats that caused the World Heritage Committee to include Yellowstone NP on a list of World Heritage sites in Danger. Mining would not affect the Park's Bioshpere Reserve designation.</td><td rowspan="2">Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining-related activities would not be anticipated.</td></tr>
<tr><td>Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining-related activities forecast under this scenario would be more likely than with the other Scenarios. Lands adjacent to Yellowstone NP would remain open to mineral entry.</td><td>Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining-related activities forecast under this scenario would be much less than under Scenario A-1. Lands adjacent to Yellowstone NP would remain open to mineral entry.</td><td>Potential for impacts on Park operations, Park visitation, visitor experiences, and World Heritage Site designation from mining-related activities would be similar to, but less in intensity than, those described in Scenario A-1. The effects would be less intense, because the lands adjacent to Yellowstone NP would be withdrawn from mineral entry.</td></tr>
</table>

Wilderness

Affected Environment. With exception of the Highway 212 corridor into Wyoming, the study area is virtually surrounded by the Absaroka-Beartooth (A-B) Wilderness, the North Absaroka Wilderness in Wyoming, and Yellowstone NP. The Wilderness Act directs land managing agencies to protect the natural character of the wilderness and to provide for recreational, scenic, scientific, educational, cultural, and historical uses of wilderness. The Wilderness Act defines four requisite attributes of wilderness: natural integrity, apparent naturalness, outstanding opportunities for solitude, and opportunities for primitive recreation. These attributes are applied to the conditions inside the boundaries of the wilderness. Although the experience of wilderness visitors might be affected by activities outside the Wilderness boundary, the Wilderness Act does not require that adverse effects associated with those activities be mitigated.

The final boundaries of the A-B and the North Absaroka Wilderness boundaries were established for many reasons. The most obvious were to include those areas with the most outstanding wilderness qualities. The boundaries were adjusted to fit the terrain and to facilitate management of the Wilderness area. The proposed mineral withdrawal study

Absaroka-Beartooth Wilderness north of study area, near Goose Lake.

area was excluded from Wilderness designation due to the presence of private land, access roads, and mineral potential. Areas were also excluded to provide for nonwilderness values such as motorized recreation and to allow for wildlife habitat improvement projects.

The A-B is the most heavily visited wilderness in the Forest Service Northern Region. Within the study area, 11 trails access the A-B Wilderness while one trail accesses the North Absaroka Wilderness. Water quality degradation is not permitted for waters entering wilderness.

Environmental Consequences. Table 7 presents a comparison of the environmental effects that may occur with implementation of each scenario.

TABLE 7. SUMMARY COMPARISON OF EFFECTS TO WILDERNESS RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><td colspan="4">Wilderness</td></tr>
<tr><td colspan="3">Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities would change the solitude, natural integrity, and primitive recreation experience available in wilderness areas surrounding the study area. Changes in nearby human activity, noise, dust, wilderness water quality, and night lighting caused by mining would also likely change the primitive recreation experience. Users seeking solitude and natural environments may be displaced</td><td rowspan="2">Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on solitude, natural integrity, and primitive recreation are not anticipated from mining.</td></tr>
<tr><td>Potential for impacts on solitude, natural integrity, and primitive recreation from mining-related activities forecast under this scenario would be more likely than with the other scenarios. Impacts would be most likely in A-B Wilderness west and north of the study area. Lands adjacent to wilderness would remain available for mineral entry.</td><td>Potential for impacts on solitude, natural integrity, and primitive recreation from mining-related activities forecast under this scenario would be much less than under Scenario A-1. Impacts would also be less likely in the Clarks Fork or Stillwater watersheds due to the NWM Agreement. Lands next to wilderness would remain available for mineral entry.</td><td>Potential for impacts on solitude, natural integrity, and primitive recreation from mining-related activities would be less than with Scenario A-1 because mining would be concentrated in the center of the study area. Although 17,760 acres of federal land adjacent to wilderness would be unavailable for mining-related activities, mining could affect water quality in the Clarks Fork and Stillwater Rivers which flow into the A-B Wilderness.</td></tr>
</table>

Roadless Areas

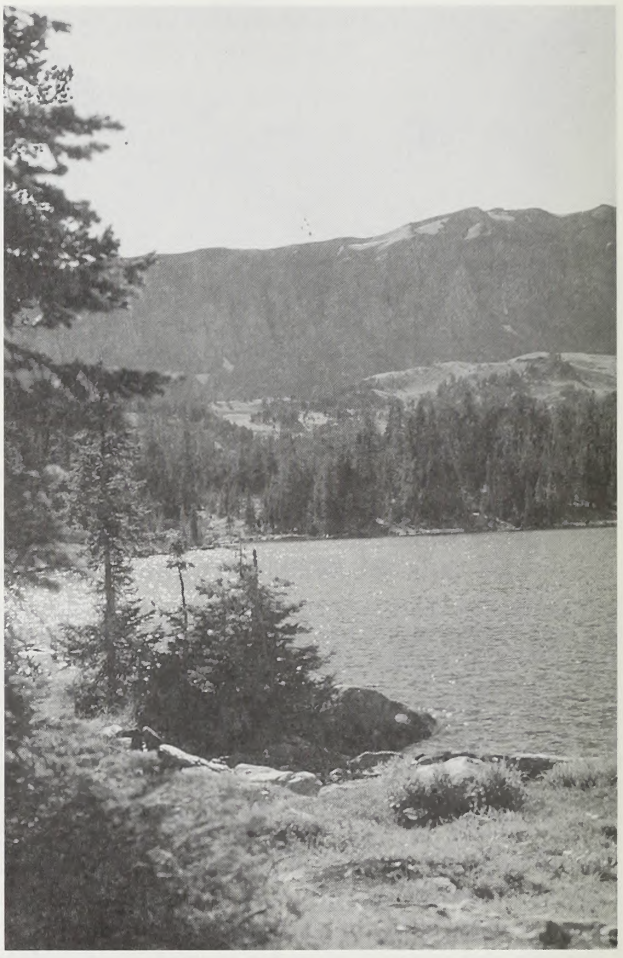
Affected Environment. Inventoried roadless areas refer to areas of National Forest System lands larger than 5,000 contiguous acres (unless adjacent to an existing wilderness area) with no developed roads that have been inventoried for possible inclusion into the Wilderness Preservation System. Nearly 13,000 acres, or 60 percent of the study area is inventoried "roadless". The roadless areas are adjacent to the A-B and North Absaroka Wildernesses. The four inventoried roadless areas are Republic Mountain, Reef, North Absaroka, and Beartooth. The Republic Mountain area was recommended for wilderness in the Gallatin NF plan. The other three areas were not recommended for wilderness designation by the Forest Service, nor were they included in any recent Montana wilderness bills.

Six criteria are use in evaluating effects on roadless areas: natural integrity, apparent naturalness, remotentess, solitude, special features, and manageability and boundaries. These criteria serve as the basis for evaluating effects to roadless area that may occur from future mining.

The Beartooth Roadless area is currently affected in several ways by man-made features. The Goose Lake road which bisects the roadless area, provides motorized access for four-wheel drive and off-highway (4X4/OHV) vehicles to area lakes. Development around Kersey Lake also affects the natural integrity of the roadless area. Motorized 4X4/OHV use on roads in the summer and snowmobiling in the winter reduce the apparent naturalness and remoteness of the roadless area. Noise from US 212 is audible within the portion of the area near the highway.

The North Absaroka Roadless area is composed of 12 separate units, of which two units, Mineral Mountain on the Gallatin NF and Mount Abundance on the Custer NF, are within the study area. These units show evidence of past mining activity in places; otherwise, the natural integrity of the units is unimpaired. Opportunities for solitude are fair because of the proximity to Cooke City and Silver Gate, adjacent resource activity, and limited size. The area has more motorized (primarily snowmobiling) than nonmotorized use.

The Reef Roadless Area is surrounded by US 212 on the north, and natural, undisturbed land in the southern part of the area. The natural integrity, remoteness, and opportunities for solitude are limited in the northern part of the Roadless Area because of impacts from traffic on US 212. Away from the highway, the roadless area has a high degree of natural integrity.



Round Lake, Beartooth Roadless Area, northeast portion of study area.

The Republic Mountain Roadless Area is just southwest of Cooke City and is well accessed by US 212 on the north and by the Irma Mine jeep road on the east. The natural integrity of the roadless area is affected by old mine workings in a few places; however, the impacts from previous mining are confined to the flatter areas along the north and east boundaries and do not extend to the steeper slopes.

Environmental Consequences. Table 8 presents a comparison of the environmental effects that may occur with implementation of each scenario.

TABLE 8. SUMMARY COMPARISON OF EFFECTS TO INVENTORIED ROADLESS AREAS BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><td colspan="4">Roadless Areas</td></tr>
<tr><td colspan="3">Mineral activity-related effects would vary by scenario, based on probability of mineral development. General effects of mining related activities could change the natural integrity and apparent naturalness, the remoteness and solitude, and the manageability and boundaries of roadless areas.</td><td rowspan="2">Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on natural integrity, apparent naturalness, remoteness, solitude, manageability, and boundaries of roadless areas withdrawn from mineral entry would not be anticipated from mining.</td></tr>
<tr><td>Potential for impacts on natural integrity and apparent naturalness, the remoteness and solitude, and the manageability and boundaries of four roadless areas from mining- related activities forecast under this Scenario would be more likely than with the other scenarios. Activity associated with the NW Mine may reduce the size of the Beartooth R.A.</td><td>Potential for impacts on natural integrity and apparent naturalness, remoteness and solitude, and the manageability and boundaries of three roadless areas from mining-related activity forecast under this Scenario would be much less than under Scenario A-1. The Beartooth R.A. would not be affected by construction of the NW Mine; however, roadless areas do remain available for mineral entry.</td><td>Potential for impacts on natural integrity and apparent naturalness, remoteness and solitude, and the manageability and boundaries of the portion of Beartooth R.A. near Fisher Creek from mining-related activities forecast under this Scenario would be similar to Scenario A-1. Reef, Republic Mountain and most of North Absaroka R.A.s would be withdrawn from mineral entry and probably would not be affected.</td></tr>
</table>

Wild and Scenic Rivers

Affected Environment. All drainages in the study area are tributaries to a designated or eligible Wild and Scenic River segment. The Clarks Fork of the Yellowstone River is a designated "Wild" river 20 miles downstream from the study area. Outstandingly remarkable values include scenery, recreation and history. Within the study area, a 1.8 mile segment of the Clarks Fork River is eligible for designation based on outstanding scenery. Soda Butte Creek within Yellowstone National Park is an eligible river with outstandingly remarkable values of scenery, wildlife, history and geology. A 20-mile segment of the Stillwater River within the A-B Wilderness immediately downstream from the study area is eligible as a "Wild" river, based on recreation and scenic values. A two-mile segment of the Upper Stillwater River within the study area is eligible as a recreation river due to recreation and scenic values. The water quality of the Upper Clarks Fork of the Yellowstone, Soda Butte Creek, and the Stillwater River has been degraded from historical mining activities. On-going mine reclamation activities in the area may improve water quality.

Environmental Consequences. Table 9 presents a comparison of the environmental effects that may occur with implementation of each scenario.

TABLE 9. SUMMARY COMPARISON OF EFFECTS TO WILD AND SCENIC RIVER RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Wild & Scenic Rivers			
Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities could change water quality and outstandingly remarkable values of certain wild and scenic river segments. Most eligible or designated Wild and Scenic river segments are outside the study area. Mining upstream could degrade water quality if there are mine facility failures or ground-water contamination.			Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments would not be anticipated from mining.
Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of wild and scenic river segments from mining related activities forecast under this Scenario would be more likely than with the other Scenarios. NW Project may slightly change stream flows of Soda Butte Creek, Clarks Fork or Stillwater R. Scenic values of Stillwater R. within the study area could be affected.	Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of Wild and Scenic river segments from mining related activities forecast under this Scenario would be much less than under Scenario A-1.	Potential for impacts on water quality, free-flowing segments, and outstandingly remarkable values of wild and scenic river segments from mining related activities forecast under this scenario would be similar to Scenario A-1. Risks to water quality, free-flowing character, and outstandingly remarkable values of the Stillwater R. would be reduced due to the proposed mineral withdrawal.	

Air Quality

Affected Environment. Air quality in the study area is excellent. Yellowstone NP and the North Absaroka Wilderness area to the south were designated as Class I PSD areas under the Prevention of Significant Deterioration (PSD) program when the Clear Air Act was amended in August 1977. The A-B Wilderness, which was established in March 1978, is a Class II area.

Prevailing wind direction is from the southwest, although individual storm fronts can have prevailing north or south wind directions. Up valley and down valley wind patterns develop during summer. Wind dispersion throughout the study area is robust; although, localized inversions can develop over Cooke City and Silver Gate.

Environmental Consequences. Table 10 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

TABLE 10. SUMMARY COMPARISON OF EFFECTS TO AIR QUALITY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Air Quality			
Mineral activity-related effects would vary by Scenario, based on probability of mineral development. General effects of mining related activities would cause particulate and gaseous emissions as well as visibility impacts that would effect overall air quality.			Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on water quality, free-flowing segments, and outstandingly remarkable values of wild and scenic river segments would not be anticipated from mining.
Potential for particulate and gaseous emissions as well as visual impacts from mining related activities forecast under this Scenario would be more likely than with the other scenarios. Emissions would likely not exceed Prevention of Significant Deterioration (PSD) or National Ambient Air Quality Standards.	Potential for impacts on air quality from mining related activities forecast under this scenario would be much less than under Scenario A-1.	Potential for impacts on air quality from mining related activities forecast under this scenario would be similar to Scenario A-1. Potential for air quality impacts to Yellowstone NP and wilderness areas would be reduced because mining would be concentrated in the center of the study area.	

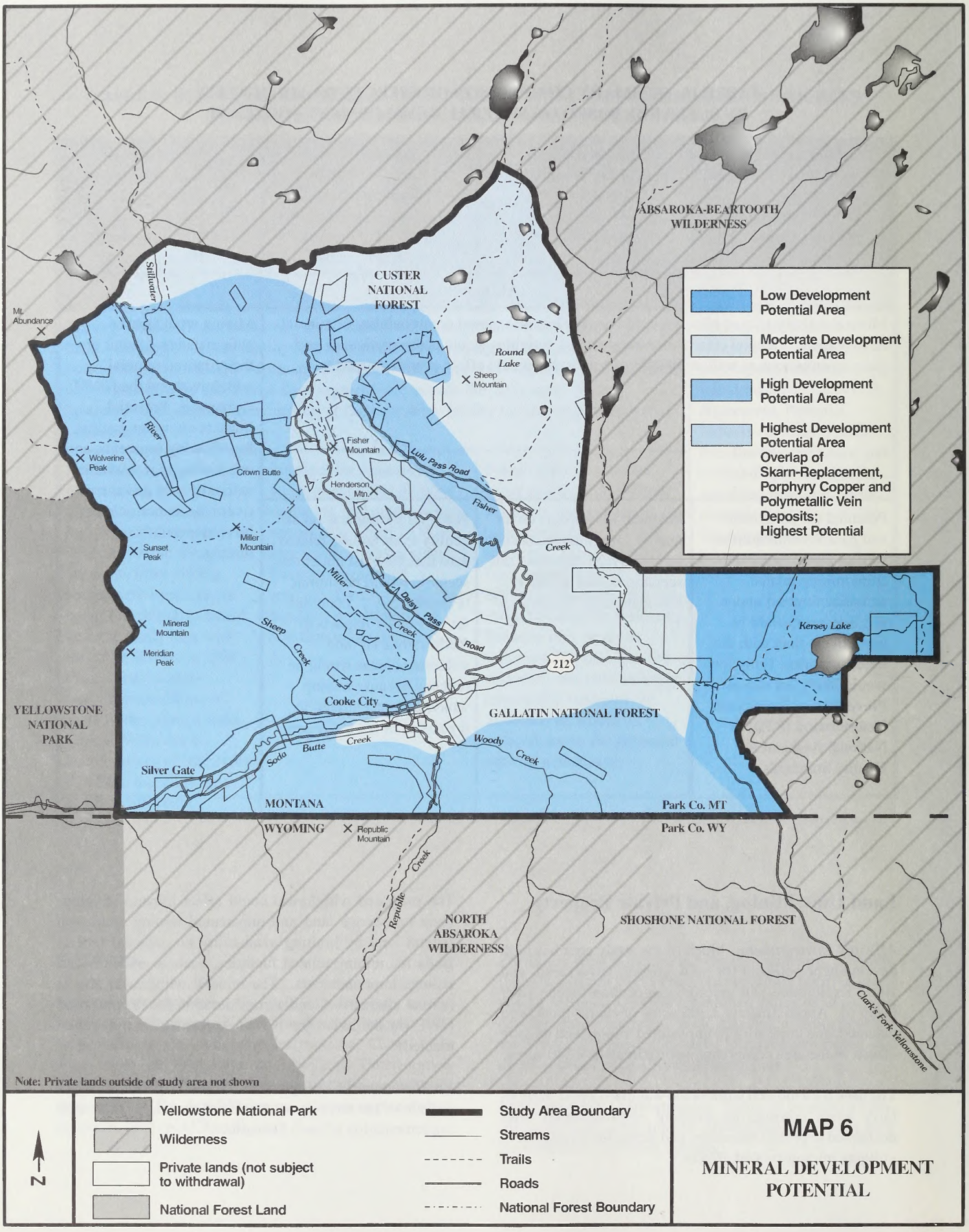
Land Uses, Mining, and Private Property

Affected Environment. Much of the study area has high development potential for gold, copper, silver, lead, and zinc. Exploration and mining have occurred since 1869 (Map 6). Approximately 3,300 acres of claims have been patented, and there are 470 unpatented mining and millsite claims in the area comprising approximately 4,240 acres.

The need for a mineral withdrawal was questioned, particularly when considering existing environmental laws desighned to protect resources, and technoloby available to mitigate mining-related effects.

The proposed withdrawal could affect mineral development on private land and unpatented mining claims on federal land by limiting availability on adjacent federal lands for mining-related facilities, such as millsites and tailings impoundments. The mineral withdrawal affects several alternatives under consideration for the proposed NWP (in the event the NWM Agreement is not implemented).

Environmental Consequences. Table 11 presents a comparison of the environmental effects that may occur with implementation of each Scenario.



MAP 6

MINERAL DEVELOPMENT POTENTIAL

TABLE 11. SUMMARY COMPARISON OF EFFECTS TO LAND USES, MINING AND PRIVATE PROPERTY BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Land Uses			
Potential metal production from known mineral reserves (New World Project) could include 2.3 MM oz. of gold, 8.8 MM oz. of silver, and 132 MM lb. of copper. Speculative production could include 2.6 MM oz. of gold, 10.0 MM oz. of silver, and 179 MM lb. of copper.	There would be no metal production from known mineral reserves. Speculative production could include 2.6 MM oz. of gold, 10.0 MM oz. of silver, and 179 MM lb. of copper.	Potential metal production would be the same as with Scenario A-1.	No metal production would be anticipated.
New World Project Alternatives would not be affected. Additional options could be developed on federal land available to mineral entry.	The New World Project would not be developed due to the NWM Agreement.	Three alternatives and other options for development and/or mitigation would be unavailable because of the mineral withdrawal. Alternative locations for sites on private land may be less environmentally desirable.	The New World Project would not be developed due to the NWM Agreement.
Private Land and Unpatented Mining Claims would not be affected.	The NWM Agreement may affect development of private land interspersed with interests acquired under the NWM Agreement.	Development of private lands and unpatented federal mining claims may be hampered by lack of available lands for mine facilities.	Mining development of remaining lands would be hampered by the lack of available land for facilities.

Mineral exploration, core drilling, near Henderson Mountain.

Economics

Affected Environment. The relatively small economies of Park County, MT, Park County, WY and especially Cooke City and Silver Gate are strongly influenced by their proximity to Yellowstone NP. Recreation and tourism are major sources of employment and income. Economic activity in the Cooke City/Silver Gate area is constrained by limited access to the area in the winter. This isolation has contributed to the development of a seasonal economy, high transportation costs, and a relatively high cost of living.

The local and regional economies have been rapidly growing in recent years; employment, wages, population and housing demand have increased. Growth has centered on tourism and recreation. Growth is expected to continue with or without mining. Mining related jobs are generally higher paying jobs while service jobs are at the lower end of the pay scale.

Environmental Consequences. Table 12 presents a comparison of the environmental effects that may occur with implementation of each scenario.

Social

Affected Environment. The Cooke City/Silver Gate community (93 permanent and 318 seasonal residents in 1991) would feel the greatest social impact of mining or a mineral withdrawal. Other communities that would be affected include Cody (population 7,900) and Powell (population 5,290) in Park Co., WY, and Livingston (population 7,410) and Gardiner (population 511) in Park Co., MT.

Concern about development of this area is not just a local issue; it is regional and national in scope. Those in favor of mineral development cite the known valuable mineral reserves, the mining history of the area, the economic benefits, and that laws and technology are in place to protect the environment. Those opposed to mining cite the risk to outstanding resources in the area and question whether an industrial activity like mining is appropriate in this setting. Changes to the character of the area and the quality of life are issues.

Concerns about future mining included loss of recreation opportunity, influx of mobile homes and mine workers, increased traffic, and possible displacement of seasonal help and tourists due to the mine.

Environmental Consequences. Table 13 presents a comparison of the environmental effects that may occur with implementation of each Scenario.

Cultural

Affected Environment. Human occupation of the area spans approximately 12,000 years. The study area, in the higher elevations of the Beartooth Mountains, participated in the prehistoric cultural development which characterizes south central Montana and adjacent Wyoming. This region supported a long series of occupations by small, mobile hunting-gathering groups who entered the area about 12,000 to 10,000 years ago.

Shoshone peoples moved into the area from the southwest beginning around 1400 A.D.. About 1700 A.D., the Crow came in from the east. Horses were introduced to Plains hunting groups by about 1725 and by 1775 most groups had horses. Although the Shoshone were apparently the first Northwestern Plains group to acquire the horse, one branch of Shoshone, which early accounts put in Yellowstone NP and the Beartooth Mountain Range, lacked horses and guns and lived in brush and pole shelters. Called Sheepeaters because mountain sheep were a main source of food, this group is thought to be a mixture of Shoshone and Bannock. These peoples left the Park in the 1870's to join the Shoshone on the Wind River Reservation in Wyoming.

TABLE 12. SUMMARY COMPARISON OF EFFECTS TO THE ECONOMIC ENVIRONMENT BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

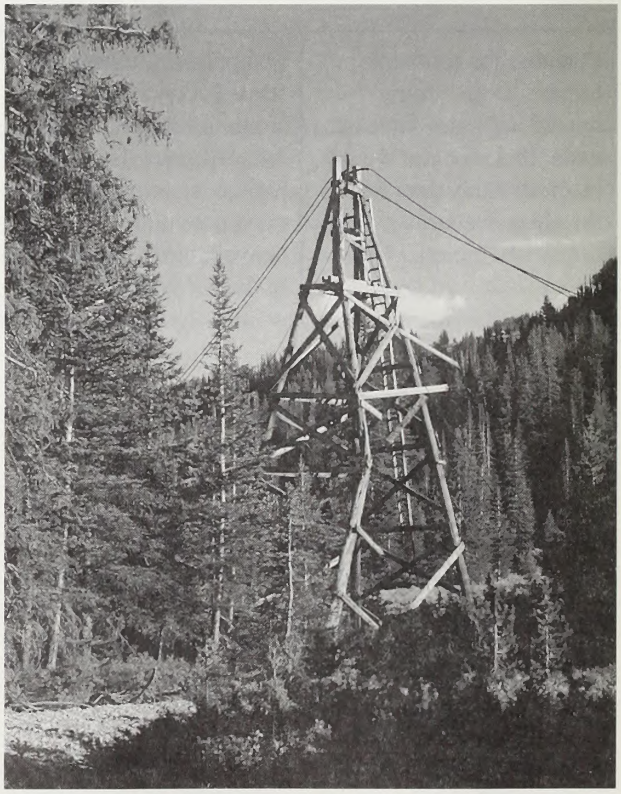
Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Economics			
Mining-related effects would vary by Scenario, based on probability of mineral development; however, the following contains a description of general economic effects of mining. Employment and income would peak during mine development, decline slightly and level off during mine operation. Temporary jobs would be created by exploratory drilling operations, powerline construction, work camp construction, mine reclamation, plowing highways in the winter, building homes for employees, and highway maintenance. Costs to local governments would increase with increased demand for services as workers move to the area. County and local governments may experience budget shortfalls. Under the terms of the Montana Hard Rock Mining Impact Act and Proper Tax Based Sharing Act, a proposed project qualifies as a large-scale mineral development requiring the development of an Impact Plan. The Impact Plan will identify affected jurisdictions, and require the operator to pay for costs resulting from project-related impacts to local governments. The Impact Plan process does not apply to Wyoming jurisdictions; however, potential shortfalls in Wyoming counties could be mitigated through voluntarily negotiated agreements between mining companies and affected local government entities. Mining would increase economic diversity but not economic dependency. Mining and year-round access between Cody, WY and Cooke City, MT would tend to stabilize the Cooke City economy while the mine(s) operate. The level of economic impacts would depend on the number and size of mines developed.			The likelihood of mining and related economic impacts would essentially be eliminated.
Potential for economic impacts from mining related activities forecast under this scenario would be more likely than with the other Scenarios.	The potential for mining-related economic impacts would be significantly reduced since the area of highest mineral development potential would be unavailable for mining due to the NWM Agreement.	Mining related economic impacts would be similar to Scenario A-1 due to anticipated development of the NWM.	

TABLE 13. SUMMARY COMPARISON OF EFFECTS TO THE SOCIAL ENVIRONMENT BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Social			
Mining-related effects would vary by Scenario, based on probability of mineral development; however the following contains a description of general social effects of mining. Population would increase by about 50 permanent residents in the Cooke City/Silver Gate, MT area and by an estimated 360 permanent residents per mine in Park Co., MT, and Park Co., WY. Population increases would also occur from employment related to other activities. Demand for housing would increase, especially in Cody and Powell. Increased demands would be placed on schools, emergency services, domestic water, wastewater and solid waste disposal, and social services. Some infrastructure has little or no room to absorb the growth. Mining would alter the social character and quality of life in Cooke City and Silver Gate. Some social and cultural values would also change. The level of social impacts would depend on the number and size of mines developed.			Social effects related to mining would probably be avoided. Social change would continue as the local communities grow, but at a much slower rate than if mining occurred.
Potential for social effects from mining-related activities forecast under this Scenario would be more likely than with the other Scenarios.	The potential for mining-related social effects would be reduced due to the NWM Agreement.	Social effects would be similar to Scenario A-1 due to the development of the NW Mine.	

The New World Historic District was established to protect the historic resources associated with mining from 1869 to 1942. The Historic District consists of 83 historic properties, of which 43 contribute to its designation as a National Register District. The 43 contributing sites consist of towns, mines, mills, smelters, cabins and other mine features.

Environmental Consequences. Table 14 presents a comparison of the environmental effects that may occur with implementation of each scenario.



Remnants of aerial tramway in the Fisher Creek drainage.

TABLE 14. SUMMARY COMPARISON OF EFFECTS TO CULTURAL RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

<table>
<tr><th>Alternative A,
No Mineral Withdrawal,
Scenario A-1:
NWM Agreement
Not Implemented</th><th>Alternative A,
No Mineral Withdrawal,
Scenario A-2:
NWM Agreement
Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-1:
NWM Agreement
Not Implemented</th><th>Alternative B,
Mineral Withdrawal
Implemented,
Scenario B-2:
NWM Agreement
Implemented</th></tr>
<tr><th colspan="4">Cultural</th></tr>
<tr><td colspan="3">Mining-related effects would vary by Scenario, based on probability of mineral development. General effects of mining-related activities could include damage or alteration to the individual cultural sites. Increased use of the area or improved access to sites could also result in damage to sites and loss of the integrity of the New World Historic District.</td><td rowspan="2">Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on cultural resources, especially the integrity of the New World Historic District would not be anticipated from mining.</td></tr>
<tr><td>Potential for impacts from mining- related activities forecast under this scenario would be more likely than with the other Scenarios. Activities would affect the integrity of the New World Historic District.</td><td>Potential for impacts on cultural resources and especially the integrity of the New World Historic District from mining-related activities forecast under this Scenario would be much less than under Scenario A-1.</td><td>Potential for impacts on cultural resources, especially the integrity of the New World Historic District from mining-related activities forecast under this scenario would be similar to those with Scenario A-1. Mineral development in the New World District would be likely.</td></tr>
</table>

Wildlife

Affected Environment. The study area is rich in terms of biodiversity. The area has few human inhabitants and is adjacent to a large expanses of undeveloped lands. This provides habitat for animals requiring minimal contact with humans, and/or large diverse home ranges where movement corridors are intact. Furthermore, the area is adjacent to Yellowstone National Park which is internationally known for its large free-roaming herds of bison and elk and endangered species, such as the grizzly bear and the gray wolf.

According to the US Fish and Wildlife Service, threatened and endangered species that may occur in the study area include grizzly bear (resident), gray wolf (resident, transient), bald eagle (resident, transient), and peregrine falcon (resident migrant).

At this time, there is no ongoing wolf pack activity in the study area; although, wolves may occasionally pass through the area. Bald eagles are residents and winter visitors to the area. suitable nesting habitat may occur and foraging habitat is present within the study area; however, there are no known nest sites. Peregrine falcons are considered uncommon in this area. There are abundant suitable cliff nest sites, but much of the study area is still covered with deep snow during the nesting season and is not considered attractive to nesting peregrines.

A self-perpetuating grizzly bear population exists within the Greater Yellowstone Area. Trend data indicates the grizzly bear population is increasing following a decline caused by the closure of garbage dumps in 1970-1971, in concert with other factors. The majority of grizzly bear mortalities since 1974 are attributable to human-related incidents, such as shootings and management control actions. Almost half of the mortality risk is associated with people carrying firearms on National Forests. Known and probable grizzly bear deaths tend to be centered around specific areas in and around Yellowstone Park, such as gateway communities of West Yellowstone, Cooke City

and Gardiner, as well as certain recreational developments, sheep grazing allotments, and other human concentration areas.

The habitat considered essential for recovery of the grizzly (Management Situation 1) within the study area is underutilized by grizzly bears because of present levels of human activity and past levels of grizzly bear mortality. The area around Cooke City and Silvergate is considered a population sink (an area that brings grizzly bears into contact with humans often resulting in removal of bears from the population). The number of human-caused grizzly bear mortalities is positively correlated with increased human access and activity and the resulting increased contact between bears and humans.

Denning habitat is not considered to be a limiting factor for grizzly bears in the Yellowstone area. Suitable denning habitat exists on high elevation slopes containing dense conifer cover, including (but not limited to) portions of Republic, Woody, Hayden, and Cache Creeks, Soda Butte to the Lamar Valley, and Lady of the Lake Creeks. Hiding and security habitat in the area is limited due to high road density and high levels of human use. In addition, the quality of the hiding and security cover varies throughout the study area because of past fire and timber harvests.

The analysis of affects to grizzly bear habitat is (in part) based on assessment of effects on "core" areas. Core areas are defined as areas where: (1) no motorized use of roads and trails occurs during the non-denning period, and restricted roads require closure devices that are permanent; (2) no roads or trails exist that receive non-motorized, high intensity use; and (3) a minimum of 0.3 miles exists from any open road or motorized trail. The extent of core area changes seasonally, primarily due to seasonal trail use involving hiking, skiing of hunting activities. As recreation use increases, core areas may shrink as a result of increased human presence.

FS Northern Region Sensitive species (species for which population viability is a concern) that may be present in the area include eight animals (Townsend's big-eared bat, wolverine, lynx, spotted bat, common loon, harlequin duck, boreal owl, black-backed woodpecker) and nine plants (Pink agoseris, large-leaved balsam root, slender paintbrush, parrot-head Indian paintbrush, hiker's gentian, northern rattlesnake plantain, discoid goldenweed, Hall's rush, and Wolf's willow).

Moose, elk, mule deer, bighorn sheep, and mountain goats live in the study area. Existing use of the study area by bison is restricted to a few incidents in the late summer and early fall.

Environmental Consequences. Table 15 presents a comparison of the environmental effects that may occur with implementation of each scenario.

Grizzly bears.

TABLE 15. SUMMARY COMPARISON OF EFFECTS TO WILDLIFE RESOURCES BY SCENARIO, BASED ON MINERAL DEVELOPMENT FORECAST

Alternative A, No Mineral Withdrawal, Scenario A-1: NWM Agreement Not Implemented	Alternative A, No Mineral Withdrawal, Scenario A-2: NWM Agreement Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-1: NWM Agreement Not Implemented	Alternative B, Mineral Withdrawal Implemented, Scenario B-2: NWM Agreement Implemented
Wildlife			
Mining-related effects would vary by scenario, based on probability of mineral development. General effects of mining related activities could cause loss of wildlife habitat, including Grizzly bear habitat. Human caused mortality could also result from mining-related activities.			Mining would not be anticipated as a result of the proposed mineral withdrawal and the NWM Agreement. Potential impacts on wildlife habitat and populations would not be anticipated from mining.
Potential for impacts from mining related activities forecast under this scenario would be more likely than with the other scenarios. Mineral activities in the high development potential areas could affect grizzly bear core habitat areas, elk and moose winter range, mountain sheep summer and winter range and mountain goat range.	Potential for impacts on wildlife habitat and populations from mining related activities forecast under this scenario would be much less than under scenario A-1. Grizzly bear core habitat would remain available for mineral development. Mountain sheep winter range would not.	Potential for impacts on grizzly bear core habitat areas, elk and moose winter range, most mountain sheep summer range and most mountain goat range would be withdrawn from mineral entry. Mining anticipated in the central portion of the study area would result in effects similar to Scenario A-1 if human activity and recreation use increase in important wildlife habitats.	

CONSULTATION AND COORDINATION

PUBLIC NOTICES, EXTERNAL AND INTERNAL SCOPING

The lead agencies for this environmental analysis are the U.S. Department of Agriculture and the U.S. Department of the Interior. The agencies used an interagency interdisciplinary team to prepare the analysis documented in the EIS and this summary. Included in the team were members from the Northern Regional Office of the Forest Service; the Custer, Gallatin, Flathead, Kootenai, and Clearwater National Forests; and the Bureau of Land Management Montana State Office. The following "Chronology" summarizes the public participation activities that have been a part of the process to prepare the environmental impact statement.

CHRONOLOGY OF PUBLIC PARTICIPATION ACTIVITIES (AGENCIES AND GENERAL PUBLIC)

1995	
Sept 1	*Federal Register* Notice of Proposed Withdrawal: Montana
1996	
May 31	*Federal Register* Notice to prepare an Environmental Analysis and public meetings.
June 7	News Release announcing start of project.
June 10	Week of June 10, telephoned initial key contacts, claim holders, environmental organizations, mining industry representatives, MT and WY State government contacts.
June 14	Letter to more than 1,000 people announcing project.
June 18	- Interviewed by Bureau of National Affairs, for Daily Env. Report. - Briefed Senator Max Baucus' staff (Sharon Peterson) and Congressman Pat Williams' staff (George Parisot)
June 19	Met with Montana Mining Association.
June 20	Briefed Senator Burns' Staff (Kathy Sparr).
June 28	Briefed representatives from Greater Yellowstone Coalition, Northern Plains Resource Council, Sierra Legal Defense Fund, Montana Environmental Information Center.
July 8	Issued News Release to media announcing meetings.
July 10	Scoping letter sent to complete mailing list, including Montana and Wyoming State government officials.
July 15	Red Lodge public scoping meeting (45 attended).
July 16	Cooke City public scoping meeting (105 attended).
July 17	- Cody public scoping meeting (35 attended). - Briefed Wyoming Senator Simpson's Staff (Karen McCreery). - Letter to other National Forest and Bureau of Land Management Offices, Federal and State agencies, Indian Tribes, County Commissioners announcing interagency/intergovernmental scoping meeting to be held July 25, 1996.
July 18	Livingston public scoping meeting (55 attended).
July 25	Agency scoping meeting attended by representatives from National Park Service; U.S. Fish and Wildlife Service; Montana Department of Fish, Wildlife and Parks; Gallatin National Forest; Montana State Office, Bureau of Land Management; Custer National Forest; and Park County, Montana.

Aug 5	Letter to tribes requesting comments and concerns by September 6, 1996.
Aug 8	- Provided initial telephone briefing about project to Crow Tribe Official and solicited response regarding concerns about the effect of the project on any traditional Crow cultural properties in the study area (John Pretty On Top, Crow Cultural Committee). - Provided initial telephone briefing about project to Shoshone Bannock Tribe Official (Randy Thompson, Cultural Committee).
Aug 19	- Telephone discussion with Shoshone Bannock Tribe Official (Diana Yupe) to answer questions about the project, and to solicit response regarding concerns about the effects of the proposed project on any traditional Shoshone Bannock cultural properties in the study area. - Contacted Shoshone Tribe (Ivan Posey) to provide initial briefing about the proposed withdrawal and to solicit response regarding concerns about effect of the project on traditional Shoshone cultural properties in the study area. - Contacted Arapho Tribe (Francis B. Brown, Arapaho Cultural Committee) to provide a briefing about the proposed withdrawal project and to solicit response regarding concerns about the effect of the projects on traditional Arapaho Tribe cultural properties in the study area.
Sept 20	*Federal Register* Notice of Amendment to Proposed Withdrawal.
Sept 26	Briefed Senator Burns' Office (Dwight McKay).
Sept 27	- Briefed Senator Baucus' Office (Marilyn Kramer). - Phoned Jim Magagna, Wyoming Director of Federal Land Policy; Offered to brief Wyoming State Government officials. - *Federal Register* Notice of meetings and Notice Of Intent to prepare an EIS.
Sept 30	Letter to 700 people giving update on status and announcing meetings.
Oct 1	Briefed Cooke City Chamber of Commerce
Oct 8	- Briefed officials from Montana Department of Environmental Quality. - Provided a phone briefing of Senator Simpson's staff and Congresswoman Cubin's staff.
Oct 10	Responded to request for budget information from Senator Burns' staff (Dwight McKay).
Oct 11	News Release announcing meetings and current status.
Oct 13	- Public Meeting: Open House (second round of scoping) in Cody (12 attended). - Letter to 383 property owners within the withdrawal study area providing background and update.
Oct 24	Public Meeting: Open House (second round of scoping) in Livingston (24 attended).
Nov 18-26	Letters to Yellowstone National Park, USGS, USF&WS, EPA, and CEQ inviting their participation in the review of the PDEIS.
Nov 26	Briefed Wyoming Congressional delegation, key staff members, Jim Magagna (WY Commissioner of Public Lands), and others from WY state government.
Dec 10	Washington, D.C., briefing for Environmental Protection Agency, Bureau of Land Management, Department of Justice, Department of Agriculture, Department of the Interior, and Forest Service
1997	
Jan 1-10	Federal Interagency review of Preliminary Draft EIS by Yellowstone National Park, EPA, CEQ, DOJ, USFS, BLM, USF&WS, NPS, USGS

DISTRIBUTION AND REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SUMMARY

Distribution of the EIS

Copies of the Draft EIS (or the EIS Summary) are being mailed to over 900 persons, groups, local governments, and agencies that have expressed an interest in the project. The mailing list was compiled using the names and addresses from the following sources:

- Parties who requested to have their names placed on the mailing list for the project;
- Parties who have participated at meetings and/or who have submitted written comments to date in the process;
- Federal and State agencies consulted during the preparation of the EIS; and
- Other Federal, State, and local (to the study area) entities potentially affected by the proposed withdrawal.

Review of the EIS

Copies of this EIS can be reviewed at the following locations:

- Northern Region Office, U.S. Forest Service, Missoula, Montana
- Bureau of Land Management, Montana State Office, Billings, Montana
- Bureau of Land Management, Wyoming State Office, Cheyenne, Wyoming
- Custer National Forest, Supervisor's Office, Billings, Montana
- Gallatin National Forest, Supervisor's Office, Bozeman, Montana
- Helena National Forest, Supervisor's Office, Helena, Montana
- Shoshone National Forest, Supervisor's Office, Cody, Wyoming
- Beartooth Ranger District Office, Red Lodge, Montana
- Gardiner Ranger District Office, Gardiner, Montana
- Livingston Ranger District Office, Livingston, Montana
- Environmental Protection Agency, Denver, Colorado
- Yellowstone National Park, Mammoth, Wyoming

Copies are also being placed in local public libraries in Cody, Billings, Bozeman, Livingston, Red Lodge, and Powell for public perusal.

Copies of the document also are available from the following address:

Cooke City Area Mineral Withdrawal Team
222 North 32nd Street
P.O. Box 36800
Billings, Montana 59107-6800

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